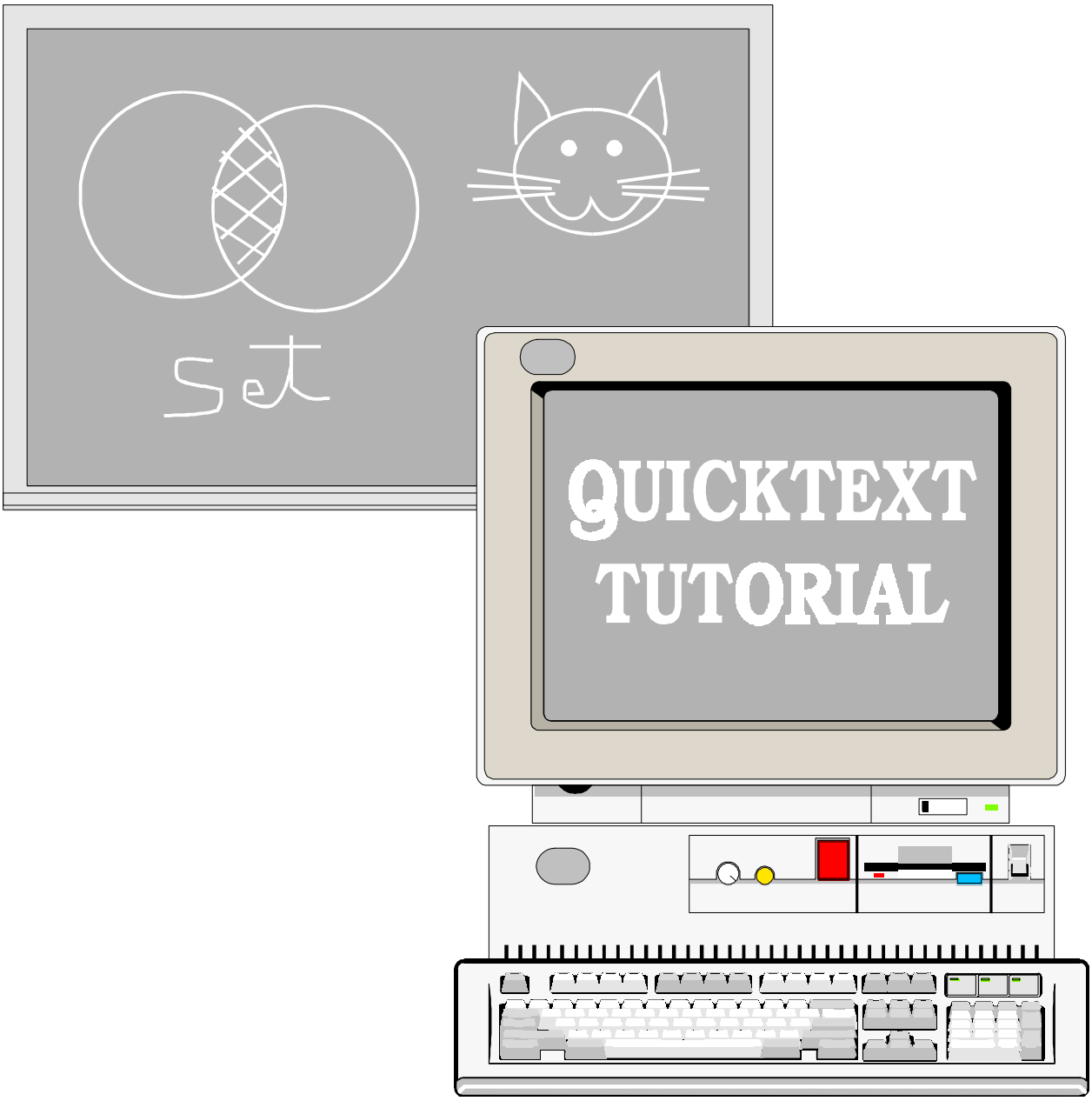

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[ ] = item has been discussed in an earlier lesson

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INDEX . . . . . I - 1

[ ] = item has been discussed in an earlier lesson

QUICKTEXT SELF-TAUGHT TRAINING PACKAGE

FOR FLOPPY DISK USERS

If you installed QUICKTEXT according to the installation instructions, all you need to do in order to access QUICKTEXT is place the "Working QUICKTEXT Programs" disk in Drive A and the "Working QUICKTEXT Data Bases" disk in Drive B and enter QT at the A> prompt.

FOR HARD DISK USERS

If you installed QUICKTEXT according to the installation instructions, your DOS commands should be located in a directory called DOS and your QUICKTEXT programs should be located in a directory called QT. Both directories are assumed to be on Drive C. For QUICKTEXT to be accessed easily, your system must have a path set to both of these directories. This can be done by entering the following path command before using QUICKTEXT:

C> **PATH C:\DOS;C:\QT <RETURN>**

NOTE: If you specified you want QUICKTEXT to access your editor, also include the path to your editor in the above PATH command; otherwise, including the path to your editor is helpful but not required. Additional directories may be added to the above PATH command to search for other program batch files located elsewhere.

A better way of establishing the path is to set up a .BAT file on the directory where your system leaves you after booting. The following example creates a batch file named QTSTART.BAT from the keyboard that will automatically switch to Drive C and establish the necessary command path. Again, if you specified an editor during the installation process include the path to your editor in the PATH statement; otherwise, including its path is optional.

A> **COPY CON: A:QTSTART.BAT <RETURN>**
C: <RETURN>
PATH C:\DOS;C:\QT <RETURN>

End by holding down the control key and pressing the character "z". Finally press <RETURN>. It should appear as:

^Z <RETURN>
1 File(s) copied

A>

You may use an editor to modify this file as your needs change in the future. For example, you may wish to include a command to change to a particular directory. Hard disk users may wish to include some or all of the above commands in their autoexec.bat file.

ABOUT THE TUTORIALS

For this tutorial it is assumed that the QUICKTEXT programs are in Drive A and the data is on Drive B. As you begin you should be on Drive A at the A> prompt. If necessary, place your DOS disk in Drive A and reboot your system. Your responses to the computer prompts throughout the training package are shown in **shaded bold** and <RETURN> means press the key marked RETURN (alternately ENTER or **<**48).

Hard disk users taking this tutorial will likely be working on Drive C, so you will observe the DOS C> prompt rather than the A> and B> in the screens figures that follow. Your data bases will likely be on Drive C and you may be using subdirectories. When asked to enter a disk unit:directory pathname, you can specify the location of a data base in a variety of ways. Disk drives can be indicated with either the drive's letter or number. For instance the hard disk could be entered as C or 3 (the colon required by DOS is optional unless a pathname is specified). Pathnames may also be specified explicitly or implicitly. See your DOS manual for details if you have additional questions concerning pathnames.

You are now ready to start the QUICKTEXT self-taught course on Data Base Management Techniques in Resource Management. This tutorial will be periodically updated. It will be the users responsibility to contact the U.S. Fish & Wildlife Service office through the National Ecology Research Center in Fort Collins, Colorado, concerning the updated version.

ACKNOWLEDGEMENTS

Many persons have contributed to these tutorials over an extended period. Kimberly Griffin worked on most of the original examples and orgainized many of the lessons. George Bowen provided technical assistance with some of the documentation and its preparation. Julie Elmund and Yvonne Magnuson provided final editing. And formost, many dedicated users, both new and old, provided valuable comments as they struggled through early versions of lessons. Special thanks to users in the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife for their continuing support by applying QUICKTEXT and their data management skills in the management of fish and wildlife resources.

LESSON 1 - GETTING STARTED

Lesson 1 demonstrates the basic functions of how to open a data base, how to get a listing of data bases on a disk, how to use the on-line help feature, and how to end a QUICKTEXT session.

Begin the QUICKTEXT program by entering QT at the A> prompt. When you are asked for the name of a data base or to press <RETURN> for an audit of available data bases, press <RETURN>. When you are asked to enter the disk unit:directory pathname to be audited, enter B:\.

As you can see in Screen 1.1, pressing <RETURN> allowed you to audit, or list, the data bases available on the disk unit:directory pathname of your choice. The audit shows the names of the data bases, when they were created, when they were last updated, the number of records and sets contained in each, and the amount of disk space required to store them. The data bases listed on Screen 1.1 are the sample data bases which are distributed with QUICKTEXT. The HELP data base is also distributed, but was placed on Drive A with the programs so it does not appear in this audit. It is used by QUICKTEXT when HELP is chosen from the main menu. Many of the terms such as records and sets will be explained in the next lesson.

```
A>QT <RETURN>
                         Welcome to QUICKTEXT Rev 2.0
                          Program Installed on 3-08-90
                           For the IBM PC/XT/AT/PS2
                            Copyright (c) 1984,1990
                          by R. Osborn & D. Schneider
                         of the US Fish & Wildlife Service

Warning!  No data base is open.

Enter the desired data base to be opened
or <RETURN> for audit of available data bases? ________ <RETURN>
Current disk unit:directory pathname is A:\
Enter disk unit:directory pathname to be audited? B:\ <RETURN>

There are 218.1 kilobytes remaining on B:\  Time: 16-MAR-90 12:09:38

Data base          Created            Updated       Records    Sets   Kilobytes
SPECIES       3-OCT-81   8:26    5-MAR-90   9:54      20          5        2.5
WETLAND      22-OCT-84 11:48     9-FEB -90 14:28      25          1       29.4
COAL         25-MAR-86 11:22    21-FEB -90 13:31       7          2       25.5
EMPLOYEE     11-SEP-84 17:01    11-SEP-84 17:33       25          4        3.9
ESIS          5-MAY-89 15:19     5-MAY-89 15:19       27          2       66.8

                                  Press <RETURN> to continue <RETURN>
```

Screen 1.1

To access or open one of these data bases and continue with QUICKTEXT you must enter the name of a valid data base. Use the SPECIES data base to continue the lesson as shown in screen 1.2.

```
Enter the desired data base to be opened
or <RETURN> for audit of available data bases? SPECIES   <RETURN>
Current disk unit:directory pathname is A:\
Enter disk unit:directory pathname to change the current directory to? B:\
Data base is B:\SPECIES
It contains  20 records, and  7 fields.
                                        Press <RETURN> to continue <RETURN>
```

Screen 1.2

Screen 1.3 shows the standard, main menu in QUICKTEXT. Its organization will be discussed in Lesson 2. For now, examine the HELP (#35) menu item, which allows you to get supplemental information on any menu item. Begin with the HELP information for OPEN (#37).

```
                                QUICKTEXT MENU
                   ================================================
 TASK            | DATA BASE    |    SETS      | RECORDS     |  PROGRAM
------------------------------------------------------------------------------
DATA ENTRY       | 1. Create       5. Modify      10. Store
and              | 2. Rebuild      6. Define      11. Update
CLEAN UP         | 3. Destroy      7. Forget      12. Delete
                 | 4. Merge
------------------------------------------------------------------------------
                 |               16. Select
PROBE            |               17. Combine                  20. FuzzyValue
                 |
------------------------------------------------------------------------------
                 |21. Directory  25. Setnames   29. Print     35. Help
REPORT           |22. Status     26. Values     32. Browse
                 |23. Fieldnames 27. Report
                 |               28. List
------------------------------------------------------------------------------
                 |37. Open       40. Export                   43. Brief
CONTROL          |38. Backup     41. Subdivide                44. Bye
                 |               42. Order                    45. Misc
                 |
------------------------------------------------------------------------------
Enter main menu selection? 35 <RETURN>
Which menu item would you like help with? 37 <RETURN>
```

Screen 1.3

The messages found in HELP are equivalent to the information in the QUICKTEXT Users Manual, but are available on-line for user convenience. Screen 1.4 shows the first page of the HELP message for the menu item OPEN (#37).

```
                        ----- OPEN -----

    The OPEN menu item establishes the current data base and the default disk
unit:directory pathname.  OPEN prompts the user for the name of a data base.
This is followed by a prompt for the disk unit:directory pathname.  Floppy
disks can be safely changed before the <RETURN> is entered to this prompt.  Any
valid directory can be examined for a data base.  If the data base is found at
the specified location, the program opens it and returns to the main menu.
Remember that opened data bases can be examined, but can not be altered if they
are "Write-protected" by MS-DOS or by covering the slot on the edge of floppy
disks.

    Some special features are available to the user during the OPEN menu item.
If <RETURN> is pressed in response to the prompt for a data base, a directory
of available data bases is provided.  If BACK is entered, the user is returned
to the main menu.  If no data base was open, only those menu items that do not
require a data base will function.  Otherwise, the previous data base will be
re-opened automatically.  If only <RETURN> is entered in response to the prompt
for the disk unit:directory pathname, the current directory pathname is used.
If the user responds to either prompt so that the data base is not found on the
selected disk unit:directory pathname, he or she is given the opportunity to
create a new data base.

                        Press <RETURN> to continue <RETURN>
```

Screen 1.4

Press <RETURN> to see the next page of the HELP OPEN information as shown in Screen 1.5. Many HELP messages offer additional information. Enter a 2 and <RETURN> to look at information related to CREATE, which is menu item #1.

```
    When QUICKTEXT is started, placing the full pathname of an existing data
base on the MS-DOS command line will automatically open it.  Otherwise, the
OPEN menu item sequence is automatically activated at start up time.  Before
the main menu is displayed, OPEN either prints the full pathname of the
currently open data base with the number of field and records it contains, or
reminds the user that no data base is open.

More information is available for:
        1) Directory Pathnames
        2) CREATE
        3) Global Features
Enter number desired? 2 <RETURN>
```

Screen 1.5

Screens 1.6 to 1.8 shows the CREATE (#1) HELP message.

```
                    ----- CREATE -----

    The CREATE menu item is used to build a new data base either interactively
by keying in the data base description, guided by a series of prompts, or by loading
an ASCII file containing output from MANAGE commands FORMAT and EXPORT
or FORMAT and REPORT in <MANAGE STYLE> free format (or alternately, data in
that form).  Creating a data base interactively requires the user to define its
structure, name, and location.  The user first specifies the number of fields
the data base will contain.  Then for each field the user enters a title, or
field name, indicates the type of data to be stored in the field, and the
number of characters, or length, allowed in the field.  After all fields are
defined, the user is asked what the data base is to be called and on which disk
unit:directory pathname it is to reside.  After a data base is created, the
user is given an opportunity to open it.  Normally the data base just created
is opened, and the actual data is entered using the STORE menu item.
Responding with NO, or BACK, to the request to open the newly created data base
returns the user to the main menu, and if a data base was open prior to CREATE,
will re-open it automatically.  Interactive data base creation is also
available through the OPEN menu item if the user attempts to open a
non-existent data base.

                                Press <RETURN> to continue <RETURN>
```

Screen 1.6

```
    CREATE may also be accomplished with an ASCII text file.  The file has two
parts.  The first consists of a table similar to the output from the MANAGE
Format command.  This table contains the information, including the name of the
data base, that would otherwise be entered from the keyboard during CREATE.
The second part of the file contains records that will be stored.  Field values
may be in either a MANAGE Export/Import format or <MANAGE STYLE> free format.

    After selecting this CREATE path, the user specifies the file name and
extension if necessary, followed by the disk unit:directory pathname where the
file is located.  The data base name is taken from the contents of the file but
the user may specify a different disk unit:directory pathname on which to
create the data base.  If the data base already exists, the user is asked to
supply a different data base name and/or directory.  Once the data base is
created and records are loaded, the user is given an opportunity to open it.
Entering NO, or BACK, will automatically re-open whatever data base was open
prior to CREATE.  Otherwise, only those menu items not requiring an open data
base will be available upon returning to the main menu.

                                Press <RETURN> to continue <RETURN>
```

Screen 1.7

Entering BACK at the "Enter number desired?" prompt in Screen 1.8 will take you back to the previous screen, Screen 1.7.

```
    Most of the choices made by the user during data base creation are not
irreversible, as they can be changed with the REBUILD menu item.  Note that
CREATE from a text file allows up to 8 megabytes of variable length data to be
loaded before requiring a variable file expansion under REBUILD.  However, this
limit is 800 kilobytes when done from the keyboard.

More information is available for:
        1) Differences between Field Types
        2) MANAGE Format Command Output
        3) MANAGE Export/Import Format
        4) <MANAGE STYLE> Free Format
        5) Additional QUICKTEXT Limits
Enter number desired? BACK <RETURN>
```

Screen 1.7

Within HELP, BACK takes you to previous screen. When not in HELP, BACK in response to a prompt, generally takes you to a previous prompt. Thus you can normally BACK out of any prompting sequence all the way back to the main QUICKTEXT menu. Press <RETURN> twice to progress through Screens 1.7 and 1.8 again and return to the main HELP prompt.

Now look at the HELP message for the menu item DIRECTORY (#21).

```
                         QUICKTEXT MENU
                       ================================================
 TASK           | DATA BASE   |    SETS     | RECORDS    |   PROGRAM
---------------------------------------------------------------------------
DATA ENTRY      | 1. Create       5. Modify    10. Store
and             | 2. Rebuild      6. Define    11. Update
CLEAN UP        | 3. Destroy      7. Forget    12. Delete
                | 4. Merge
---------------------------------------------------------------------------
                |               16. Select
PROBE           |               17. Combine                 20. FuzzyValue
                |
---------------------------------------------------------------------------
                | 21. Directory 25. Setnames  29. Print     35. Help
REPORT          | 22. Status    26. Values    32. Browse
                | 23. Fieldnames 27. Report
                |               28. List
---------------------------------------------------------------------------
                | 37. Open      40. Export                  43. Brief
CONTROL         | 38. Backup    41. Subdivide               44. Bye
                |               42. Order                   45. Misc
                |
---------------------------------------------------------------------------
Which menu item would you like help with? 21 <RETURN>
```

Screen 1.9

Screens 1.10 and 1.11 show the HELP message for the DIRECTORY menu item. The report produced by DIRECTORY is the same as the one you saw when you asked for an audit of available data bases at the beginning of this lesson.

Now return to the main menu so that you can end this initial QUICKTEXT lesson. First, enter <RETURN> to return to the main HELP menu.

```
                    ----- DIRECTORY -----

    The DIRECTORY menu item will list all data bases on the specified disk
unit:directory pathname.  The user may enter either a number or letter to
specify a disk unit.  Drive A corresponds to 1.  Directory pathnames are most
relevant to users of hard disks.  <RETURN> selects the disk unit:directory
pathname of the data base currently in use.  The message "Drive unavailable" is
printed if a letter or number beyond the last valid drive for your system is
entered;  "Directory not found" is printed if the directory pathname does not
exist.

    The report produced by DIRECTORY lists the amount of unused disk space,
and the current date and time.  Each data base is listed by name and includes
the date and time of creation, date and time last updated, number of records,
number of sets, and its approximate size.  The update date is changed when
records are stored or altered, but not when sets are created or changed.

                                  Press <RETURN> to continue <RETURN>
```

Screen 1.10

```
    The DIRECTORY menu item can be reached by two paths.  One path is from
this menu item, the other is from the OPEN menu item, which is invoked
automatically when QUICKTEXT is started.  DIRECTORY is an easy way to either
successively examine several disks or change paths and examine other
directories.

More information is available for:
        1) Directory Pathnames
Enter number desired? <RETURN>
```

Screen 1.11

Entering <RETURN> returned you to the main HELP prompt, which asks which menu item you want help with. However, you need to get to the main QUICKTEXT menu before you can end the lesson. Enter <RETURN> once again in order to return to the main menu.

```
                 QUICKTEXT MENU
               ================================================
 TASK         | DATA BASE   |     SETS     | RECORDS     |   PROGRAM
--------------------------------------------------------------------------
DATA ENTRY    | 1. Create      5. Modify     10. Store
and           | 2. Rebuild     6. Define     11. Update
CLEAN UP      | 3. Destroy     7. Forget     12. Delete
              | 4. Merge
--------------------------------------------------------------------------
              |               16. Select
PROBE         |               17. Combine                  20. FuzzyValue
              |
--------------------------------------------------------------------------
              | 21. Directory 25. Setnames   29. Print     35. Help
REPORT        | 22. Status    26. Values     32. Browse
              | 23. Fieldnames 27. Report
              |               28. List
--------------------------------------------------------------------------
              | 37. Open      40. Export                   43. Brief
CONTROL       | 38. Backup    41. Subdivide                44. Bye
              |               42. Order                    45. Misc
              |
--------------------------------------------------------------------------
Which menu item would you like help with? <RETURN>
```

Screen 1.12

Finally, to end the lesson and return to DOS, use the BYE (#44) menu item.

```
                 QUICKTEXT MENU
               ================================================
 TASK         | DATA BASE   |     SETS     | RECORDS     |   PROGRAM
--------------------------------------------------------------------------
DATA ENTRY    | 1. Create      5. Modify     10. Store
and           | 2. Rebuild     6. Define     11. Update
CLEAN UP      | 3. Destroy     7. Forget     12. Delete
              | 4. Merge
--------------------------------------------------------------------------
              |               16. Select
PROBE         |               17. Combine                  20. FuzzyValue
              |
--------------------------------------------------------------------------
              | 21. Directory 25. Setnames   29. Print     35. Help
REPORT        | 22. Status    26. Values     32. Browse
              | 23. Fieldnames 27. Report
              |               28. List
--------------------------------------------------------------------------
              | 37. Open      40. Export                   43. Brief
CONTROL       | 38. Backup    41. Subdivide                44. Bye
              |               42. Order                    45. Misc
--------------------------------------------------------------------------
Enter main menu selection? 44 <RETURN>

A>
```

Screen 1.13

Congratulations! You have just successfully used QUICKTEXT and learned the basics of how to:

* OPEN a data base

* Get a DIRECTORY listing of data bases on a disk

* Answer questions about QUICKTEXT menu items with HELP

* End a QUICKTEXT session and return to the DOS command level

Before going on the Lesson 2, take a few moments to try each menu item just discussed until you feel comfortable with the prompts and answers for these items. In addition, try the following exercise.

1. It is important to know about global features in QUICKTEXT, such as BACK, so you have a better understanding of how you can respond to QUICKTEXT prompts. Open a data base and use the HELP menu item on OPEN to find out about the global features.

LESSON 2 - EXAMINING SAMPLE DATA BASES

Lesson 2 discusses how the main QUICKTEXT menu is divided into categories of tasks and data organization. You will learn how to examine the status of the currently open data base and its sets, how to view a specific record, and how to view a set of records.

As you did in your first lesson, start QUICKTEXT and open the data base called SPECIES, as shown in Screen 2.1. Any data base can be considered a file cabinet in which many individual folders, forms or, as they are termed in data base management, records are found. The records store information in fields. A field represents a particular type of information, such as the name of a species. Fields are analogous to entries on a form. Each reserves space for a particular type of information that may vary from form to form. Another level of information organization is sets, i.e., groups of records that have something in common with one another. Getting back to the file cabinet analogy, a set could be a single drawer that had all the species records from Aardvark to Kangaroo. This idea of sets is a major concept in data base management. It is the coupling of set theory with the speed of computers that makes data base management systems so powerful and useful.

```
A>QT <RETURN>

                    Welcome to QUICKTEXT Rev 2.0
                    Program Installed on 3-08-90
                    For the IBM PC/XT/AT/PS2
                    Copyright (c) 1984,1990
                    by R. Osborn & D. Schneider
                    of the US Fish & Wildlife Service

Warning!  No data base is open.

Enter the desired data base to be opened,
or <RETURN> for audit of available data bases? SPECIES  <RETURN>
Current disk unit:directory pathname is A:\
Enter disk unit:directory pathname to change the current directory to? B:\ <RETURN>
Data base is B:\SPECIES
It contains  20 records, and  7 fields.

                                  Press <RETURN> to continue <RETURN>
```

Screen 2.1

An alternate way to view a data base is as a large matrix of information where each column of information represents a field and each row of information represents a record. Sets are merely various combinations of records that contain anywhere from all the records in the data base (termed the universal set) down to none of the records (termed the empty or null set).

When the QUICKTEXT main menu is displayed, as shown in Screen 2.2, study its organization for a while. Menu items are grouped into the type of tasks to be performed and the type of information organization, or data structure the task will operate on. Some

tasks apply to more than one data level and are therefore included in more than one column. For example, STATUS (#22) and SETNAMES (#25) are used to display information about the currently open data base and the sets that currently exist. Therefore, these menu items are listed under both the DATA BASE and SETS columns although they produce identical results.

First look at the STATUS (#22) menu item. When you are asked where you want the listing, enter 1 to have the information listed to the screen.

```
                              QUICKTEXT MENU
                  ================================================
 TASK           | DATA BASE    |    SETS     | RECORDS   |  PROGRAM
-------------------------------------------------------------------
DATA ENTRY      | 1. Create      5. Modify    10. Store
and             | 2. Rebuild     6. Define    11. Update
CLEAN UP        | 3. Destroy     7. Forget    12. Delete
                | 4. Merge
-------------------------------------------------------------------
                |              16. Select
PROBE           |              17. Combine               20. FuzzyValue
                |
-------------------------------------------------------------------
                |21. Directory  25. Setnames  29. Print   35. Help
REPORT          |22. Status     26. Values    32. Browse
                |23. Fieldnames 27. Report
                |               28. List
-------------------------------------------------------------------
                |37. Open       40. Export                43. Brief
CONTROL         |38. Backup     41. Subdivide             44. Bye
                |               42. Order                 45. Misc
                |
-------------------------------------------------------------------
Enter main menu selection? 22 <RETURN>
Where do you want this listing?    1) Screen
                                   2) Printer
Enter selection? 1 <RETURN>
```

Screen 2.2

As you can see in Screen 2.3, QUICKTEXT keeps track of the name of each set, when it was created, the number of records in the set, and the process used to create it. In addition, STATUS reminds you which data base you have open, when the data base was created, when it was last updated, how many records it contains, how many sets it contains, and how big it is. STATUS also tells you how much free space is available on your disk. To return to the main menu, press <RETURN>.

```
The current time is 19-MAR-90 14:22:09
Data base name is SPECIES.  Created  3-OCT-81  8:26.  Updated  5-MAR-90  9:54
The data base contains 20 records, 5 sets, and occupies 2.7 kilobytes.
 1% of the disk space allocated to variable length data is used.
There are 218.1 kilobytes remaining on B:\

Setname              Created         Size    Creator

BIRD            10-FEB-87  9:04        5      Select
FISH            10-FEB-87  9:03        4      Select
MAMMAL          10-FEB-87  9:05        5      Select
PLANT           10-FEB-87  8:09        2      Select
REPTILE         10-FEB-87  9:02        4      Select

                                 Press <RETURN> to continue <RETURN>
```

Screen 2.3

Next, look at the SETNAMES (#25) menu item. Send this listing to the screen by entering 1.

```
                                QUICKTEXT MENU
                  ===================================================
 TASK            | DATA BASE    |     SETS     | RECORDS     |    PROGRAM
---------------------------------------------------------------------------
DATA ENTRY       | 1. Create        5. Modify     10. Store
and              | 2. Rebuild       6. Define     11. Update
CLEAN UP         | 3. Destroy       7. Forget     12. Delete
                 | 4. Merge
---------------------------------------------------------------------------
                 |               16. Select
PROBE            |               17. Combine                   20. FuzzyValue
                 |
---------------------------------------------------------------------------
                 | 21. Directory  25. Setnames   29. Print     35. Help
REPORT           | 22. Status     26. Values     32. Browse
                 | 23. Fieldnames 27. Report
                 |                28. List
---------------------------------------------------------------------------
                 | 37. Open       40. Export                   43. Brief
CONTROL          | 38. Backup     41. Subdivide                44. Bye
                 |                42. Order                    45. Misc
                 |
---------------------------------------------------------------------------
Enter main menu selection? 25 <RETURN>
Where do you want this listing?      1) Screen
                                     2) Printer
Enter selection? 1 <RETURN>
```

Screen 2.4

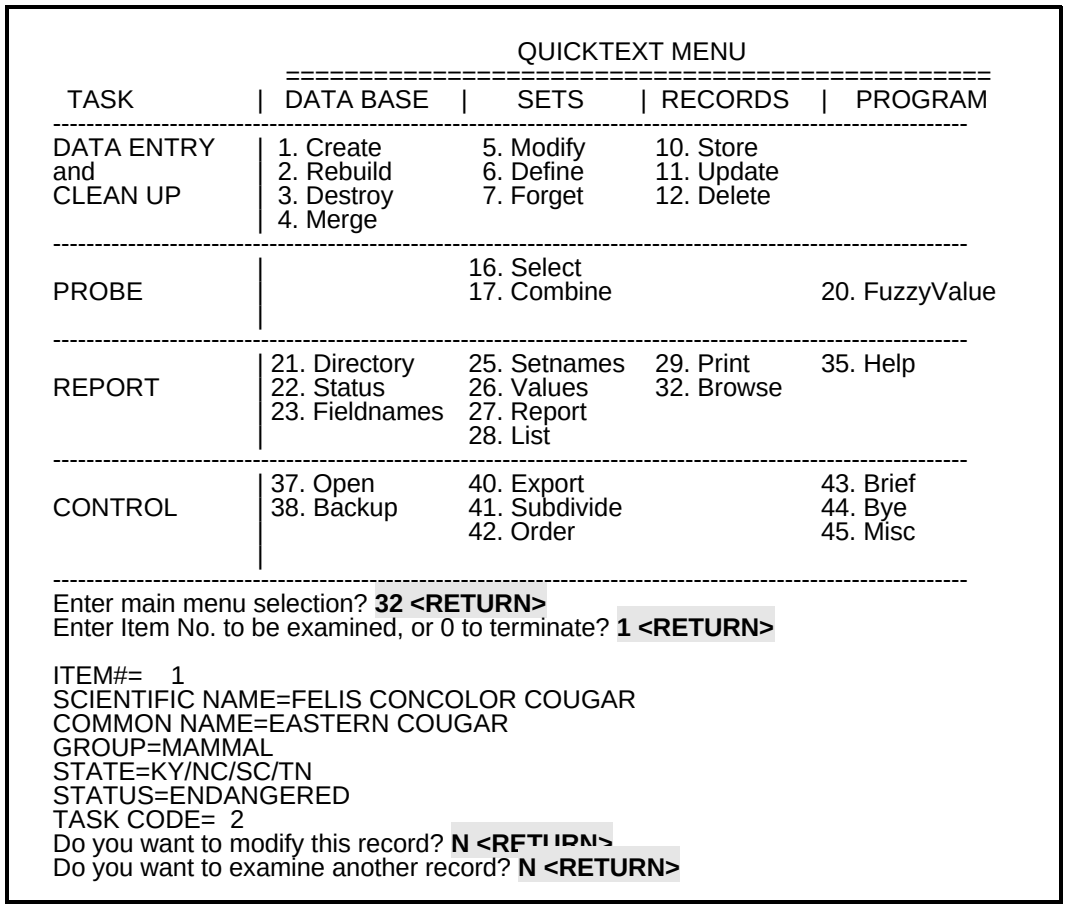
As you can see in Screen 2.5, the SETNAMES menu item provides the same information as STATUS (See Screen 2.3). Again, press <RETURN> to return to the main menu.

```
The current time is 19-MAR-90  14:23:15
Data base name is SPECIES.  Created  3-OCT-81  8:26.  Updated  5-MAR-90  9:54
The data base contains 20 records, 5 sets, and occupies 2.7 kilobytes.
 1% of the disk space allocated to variable length data is used.
There are 218.1 kilobytes remaining on B:\

Setname              Created        Size    Creator

BIRD            10-FEB-87  9:04      5     Select
FISH            10-FEB-87  9:03      4     Select
MAMMAL          10-FEB-87  9:05      5     Select
PLANT           10-FEB-87  8:09      2     Select
REPTILE         10-FEB-87  9:02      4     Select

                                  Press <RETURN> to continue <RETURN>
```

Screen 2.5

In QUICKTEXT each record, or row, in the data base is given a unique number, called its item number. QUICKTEXT provides the item number automatically when the record is stored (STORE will be discussed in Lesson 3). The most direct way to specify a record once it is in the data base is by its item number. The menu items BROWSE (#32) and UPDATE (#11) also produce identical results. Both are used to display the contents of all fields for individual records that the user specifies. The UPDATE menu item will be discussed in Lesson 4. For now, look at an example of the BROWSE menu item, as shown in Screen 2.6.

After you select BROWSE, you are asked which item number you wish to examine. Look at item number 1. Once the field contents are displayed, you are asked if you would like to modify the record; answer no. Finally, you are asked if you would like to examine another record, which you should also answer no. This will return you to the main menu.



Screen 2.6

An alternate way to look at records in a data base is with the PRINT (#29) menu item. It allows several records to be examined simultaneously by sending a copy of them to the printer. Screen 2.7 is an example of the PRINT menu item where only the first record is printed. The default printer settings are shown and will depend on which driver you have installed. Refer to your QUICKTEXT User's Manual for more information on printer drivers and defaults. You are asked if you would like to change the settings. Answer no. You are also asked if you want a page eject between each record. If you want each record printed to start on a new page, answer yes; otherwise, answer no.

```
                              QUICKTEXT MENU
                 ==============================================
 TASK           | DATA BASE   |    SETS      | RECORDS    |   PROGRAM
------------------------------------------------------------------------
DATA ENTRY      | 1. Create       5. Modify    10. Store
and             | 2. Rebuild      6. Define    11. Update
CLEAN UP        | 3. Destroy      7. Forget    12. Delete
                | 4. Merge
------------------------------------------------------------------------
                |                16. Select
PROBE           |                17. Combine               20. FuzzyValue
                |
------------------------------------------------------------------------
                | 21. Directory  25. Setnames  29. Print   35. Help
REPORT          | 22. Status     26. Values    32. Browse
                | 23. Fieldnames 27. Report
                |                28. List
------------------------------------------------------------------------
                | 37. Open       40. Export                43. Brief
CONTROL         | 38. Backup     41. Subdivide             44. Bye
                |                42. Order                 45. Misc
                |
------------------------------------------------------------------------
Enter main menu selection? 29 <RETURN>
Enter set to be listed, or enter beginning item number to list consecu-
tive records, or enter <RETURN> to list the entire data base? 1___ <RETURN>
Enter ending item number of the consecutive records to be listed? 1 <RETURN>

The printer should now be at the top of the form.
  Reset manually if necessary.

Default settings for the printer are:
          Page Length      = 11   inches
          Page Width       =  8   inches
          Top Margin       =  3   lines
          Lines per Page   = 60   lines
          Character Pitch  = 10   characters/inch
          Print Style      =      Draft mode

Do you want to change any printer settings? N <RETURN>
Do you want a page eject between each record? N <RETURN>
```

Screen 2.7

If beginning and ending item numbers are specified, all records inclusively are printed. If a set name is entered, all records in that set are printed. Try a PRINT on the set BIRD. Notice that PRINT always prints to the printer. Also, all fields are always printed. If you wish to print only some fields, you must use the REPORT menu item instead of PRINT. REPORT will be discussed later in this lesson.

The FIELDNAMES (#23) menu item can be used to examine the type, width, and title of each field in a data base as shown in Screens 2.8 and 2.9. If the data base contains variable length fields (which will be discussed in Lesson 3), you are asked what additional variable length field information is desired. The Species data base does not contain any variable length fields so that prompt is skipped.

```
                         QUICKTEXT MENU
                 ==========================================
 TASK          | DATA BASE  |    SETS    | RECORDS   |  PROGRAM
-------------------------------------------------------------------
DATA ENTRY     | 1. Create     5. Modify   10. Store
and            | 2. Rebuild    6. Define   11. Update
CLEAN UP       | 3. Destroy    7. Forget   12. Delete
               | 4. Merge
-------------------------------------------------------------------
               |    16. Select
PROBE          |    17. Combine                         20. FuzzyValue
               |
-------------------------------------------------------------------
               | 21. Directory  25. Setnames  29. Print   35. Help
REPORT         | 22. Status     26. Values    32. Browse
               | 23. Fieldnames 27. Report
               |                28. List
-------------------------------------------------------------------
               | 37. Open       40. Export                43. Brief
CONTROL        | 38. Backup     41. Subdivide             44. Bye
               |     42. Order                            45. Misc
               |
-------------------------------------------------------------------
Enter main menu selection? 23 <RETURN>
Where do you want this listing?              1) Screen
                                             2) Printer
Enter selection? 1 <RETURN>
```

Screen 2.8

As you can see in Screen 2.9, each record in the SPECIES data base has 7 fields of varying types, widths, and titles. Field types will be discussed in Lesson 3. Press <RETURN> to get back to the main menu.

```
Fieldnames for SPECIES                        19-MAR-90 19:52:32

        Type        Width  Title

 1. NUMERIC           5    ITEM#
 2. CHARACTER        35    SCIENTIFIC NAME
 3. CHARACTER        24    COMMON NAME
 4. CHARACTER         7    GROUP
 5. CHARACTER        11    STATE
 6. CHARACTER        10    STATUS
 7. NUMERIC           3    TASK CODE

                              Press <RETURN> to continue <RETURN>
```

Screen 2.9

The most frequent way of listing information from a data base is with the REPORT (#27) menu item. It has many features, but its basic utility is derived by listing, in whatever order you specify, only those fields in a set of records that are of immediate interest. An example of the REPORT menu item is given in the following screens. Special REPORT Features are explained in Lesson 8 of this tutorial. The screen scrolls upwards as each prompt is answered.

```
                         QUICKTEXT MENU
                 ==============================================
 TASK           | DATA BASE  |      SETS      | RECORDS   |   PROGRAM
-------------------------------------------------------------------------
DATA ENTRY      | 1. Create       5. Modify     10. Store
and             | 2. Rebuild      6. Define     11. Update
CLEAN UP        | 3. Destroy      7. Forget     12. Delete
                | 4. Merge
-------------------------------------------------------------------------
                |     16. Select
PROBE           |     17. Combine                          20. FuzzyValue
                |
-------------------------------------------------------------------------
                | 21. Directory   25. Setnames  29. Print  35. Help
REPORT          | 22. Status      26. Values    32. Browse
                | 23. Fieldnames  27. Report
                |     28. List
-------------------------------------------------------------------------
                | 37. Open        40. Export               43. Brief
CONTROL         | 38. Backup      41. Subdivide            44. Bye
                |     42. Order                            45. Misc
                |
-------------------------------------------------------------------------
Enter main menu selection? 27 <RETURN>
```

Screen 2.10

Suppose you want to see certain fields of the records in the set MAMMAL. As shown in Screen 2.11, send the report to the screen. Enter the field numbers to be reported, which in this case are 3, 2, 4, and 1. You are asked to enter a title, which in this case is Lesson 2. You do not want any special REPORT features (this prompt and its subsequent options will be discussed at a later point).

```
Enter the name of the set to be listed, or
<RETURN> to list the full data base? MAMMAL     <RETURN>
Where do you want this report listed?           1) Screen
                                                2) Disk
                                                3) Printer
? 1 <RETURN>

 1. ITEM#
 2. SCIENTIFIC NAME
 3. COMMON NAME
 4. GROUP
 5. STATE
 6. STATUS
 7. TASK CODE
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 3,2,4,1 <RETURN>

Enter a report title to be included in each page heading?
? Lesson 2 <RETURN>
Do you want any special REPORT features? N <RETURN>
```

Screen 2.11

When the report is finished you should have a printed report similar to the one in Figure 2.1. <RETURN> will take you to the QUICKTEXT main menu.

```
Lesson 2                                    19-MAR-90 20:38:57  Page  1

COMMON NAME       SCIENTIFIC NAME                GROUP    ITEM#
EASTERN COUGAR    FELIS CONCOLOR COUGAR          MAMMAL     1
FLORIDA PANTHER   FELIS CONCOLOR CORYI           MAMMAL     2
FLORIDA MANATEE   TRICHECHUS MANATUS             MAMMAL     3
GRAY BAT          MYOTIS GRISESCENS              MAMMAL     4
INDIANA BAT       MYOTIS SODALIS                 MAMMAL     5

                                  Press <RETURN> to continue <RETURN>
```

Figure 2.1 Sample REPORT output with no special features

Congratulations! You have successfully completed Lesson 2. For additional experience in examining sample data bases, use the WETLAND data base for the following practice exercises.

1. How many records are in the WETLAND data base?

2. What sets exist for this data base?

3. How many fields are in a record and what are their names?

LESSON 3 - CREATING YOUR OWN DATA BASE

Lesson 3 demonstrates how to create a data base, how to examine field definitions, how to store information in a data base, and how to re-define a field's definition.

When a data base is created, decisions must be made about the type of information each record will contain. These decisions include the number of fields, their names, and the type of data each field will hold. QUICKTEXT provides three separate types of fields explicitly and several other types implicitly by user interaction. Explicit types are:

1. Numeric - allows numbers to be stored and manipulated; limited to a maximum of 70 digits and a precision of 14 significant digits

2. Alphanumeric (character) - used for label or descriptive information; limited to a maximum of 70 characters

3. Variable Length - most frequently used for descriptive textual information that can vary considerably in length from one record to another; limited to 30,000 characters (at 70 characters per line, this amounts to over 400 lines of text).

Numeric and character fields require a field width to be specified that is long enough to store the longest value encountered in any record. Therefore, they are considered fixed length fields. The variable length field type allows QUICKTEXT to store information more compactly than many other data base management systems and therefore allows more records to be stored on each disk.

Using these three types of fields, QUICKTEXT also provides several implicit types of fields:

1. Keyword or KEYS field - allows several values to be stored in one field of a single record

2. Logical constructs - allows only two possible values (e.g. true or false, yes or no)

3. Dates and time - so that they can be ordered chronologically, dates should be entered as YY/MM/DD and time should be entered either in 24 hour notation or with an "a" or "p" after the value (4 in the afternoon would be 16:00 or 4:00p).

The CREATE (#1) menu item is used to create a new data base and to define the fields in that data base. The following screens will help you create a new data base, which will be used for the remainder of this lesson.

There are two ways of creating a data base. In this lesson you will be creating a data base interactively from the keyboard, as shown in Screens 3.1 to 3.3. The screen will scroll upwards as each prompt is answered.

```
                                QUICKTEXT MENU
                  =============================================
 TASK            | DATA BASE   |    SETS      | RECORDS  |  PROGRAM
-----------------------------------------------------------------------
DATA ENTRY       | 1. Create       5. Modify     10. Store
and              | 2. Rebuild      6. Define     11. Update
CLEAN UP         | 3. Destroy      7. Forget     12. Delete
                 | 4. Merge
-----------------------------------------------------------------------
                 |               16. Select
PROBE            |               17. Combine                20. FuzzyValue
                 |
-----------------------------------------------------------------------
                 |21. Directory  25. Setnames  29. Print    35. Help
REPORT           |22. Status     26. Values    32. Browse
                 |23. Fieldnames 27. Report
                 |               28. List
-----------------------------------------------------------------------
                 |37. Open       40. Export                 43. Brief
CONTROL          |38. Backup     41. Subdivide              44. Bye
                 |               42. Order                  45. Misc
                 |
-----------------------------------------------------------------------
Enter main menu selection? 1 <RETURN>

A data base may be created:

   1) Interactively from the keyboard.
   2) By loading an ASCII text file that mimics output from the MANAGE commands
      FORMAT and EXPORT, or REPORT in <MANAGE STYLE> free format.

Enter creation mode desired? 1 <RETURN>
```

Screen 3.1

The data base you will create has 5 fields in addition to the ITEM# field. The information you need to enter at each prompt is as follows:

Field	Title	Type (A, N, or V)	Width
2	NAME	A	7
3	AGE	N	2
4	BIRTHDATE	A	8
5	FAVORITE SHOW	A	21
6	COMMENT	V	

The following screens show you step-by-step the process of defining the fields of this new data base using the information above.

```
DATA BASE INITIALIZATION

This program will ask for information regarding titles, size and
the number of fields required for each record. The first field for
each record will be a 5 character item number and labeled as "ITEM#".

How many additional fields of information will be needed for each record? 5 <RETURN>

      Enter a title for field  2
? NAME <RETURN>
Will entries be numeric (N), alphanumeric (A), or variable length (V)? A <RETURN>
Enter the field width (in characters)? 7 <RETURN>

      Enter a title for field  3
? AGE <RETURN>
Will entries be numeric (N), alphanumeric (A), or variable length (V)? N <RETURN>
Enter the field width (in characters)? 2 <RETURN>

      Enter a title for field  4
? BIRTHDATE <RETURN>
Will entries be numeric (N), alphanumeric (A), or variable length (V)? A <RETURN>
Enter the field width (in characters)? 8 <RETURN>
```

Screen 3.2

The screen will continue to scroll upwards. Once you have defined the last field, as shown in Screen 3.3, you must enter the name of the new data base, FAMILY, and tell QUICKTEXT where to place it, in this case on B:\. When asked if you want to open this data base, say yes. <RETURN> will take you to the main menu.

```
      Enter a title for field  5
? FAVORITE SHOW <RETURN>
Will entries be numeric (N), alphanumeric (A), or variable length (V)? A <RETURN>
Enter the field width (in characters)? 21 <RETURN>

      Enter a title for field  6
? COMMENT <RETURN>
Will entries be numeric (N), alphanumeric (A), or variable length (V)? V <RETURN>
Enter new data base name? FAMILY__   <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname to place the new data base on? B:\ <RETURN>
Do you want to open this data base? Y <RETURN>
Data base is B:\FAMILY
It contains  0 records, and  6 fields.

                                  Press <RETURN> to continue <RETURN>
```

Screen 3.3

Next, verify the field definitions of the new data base by using FIELDNAMES (#23), as discussed previously in Lesson 2.

```
                              QUICKTEXT MENU
   ==============================================
 TASK             | DATA BASE  |     SETS      | RECORDS    |   PROGRAM
------------------------------------------------------------------------
DATA ENTRY        | 1. Create     5. Modify     10. Store
and               | 2. Rebuild    6. Define     11. Update
CLEAN UP          | 3. Destroy    7. Forget     12. Delete
                  | 4. Merge
------------------------------------------------------------------------
                  |              16. Select
PROBE             |              17. Combine                20. FuzzyValue
                  |
------------------------------------------------------------------------
                  | 21. Directory 25. Setnames  29. Print   35. Help
REPORT            | 22. Status    26. Values    32. Browse
                  | 23. Fieldnames 27. Report
                  |               28. List
------------------------------------------------------------------------
                  | 37. Open      40. Export                43. Brief
CONTROL           | 38. Backup    41. Subdivide             44. Bye
                  |               42. Order                 45. Misc
                  |
------------------------------------------------------------------------
Enter main menu selection?  23  <RETURN>
Where do you want the listing?      1)  Screen
                                    2)  Printer
Enter selection?  1  <RETURN>
```

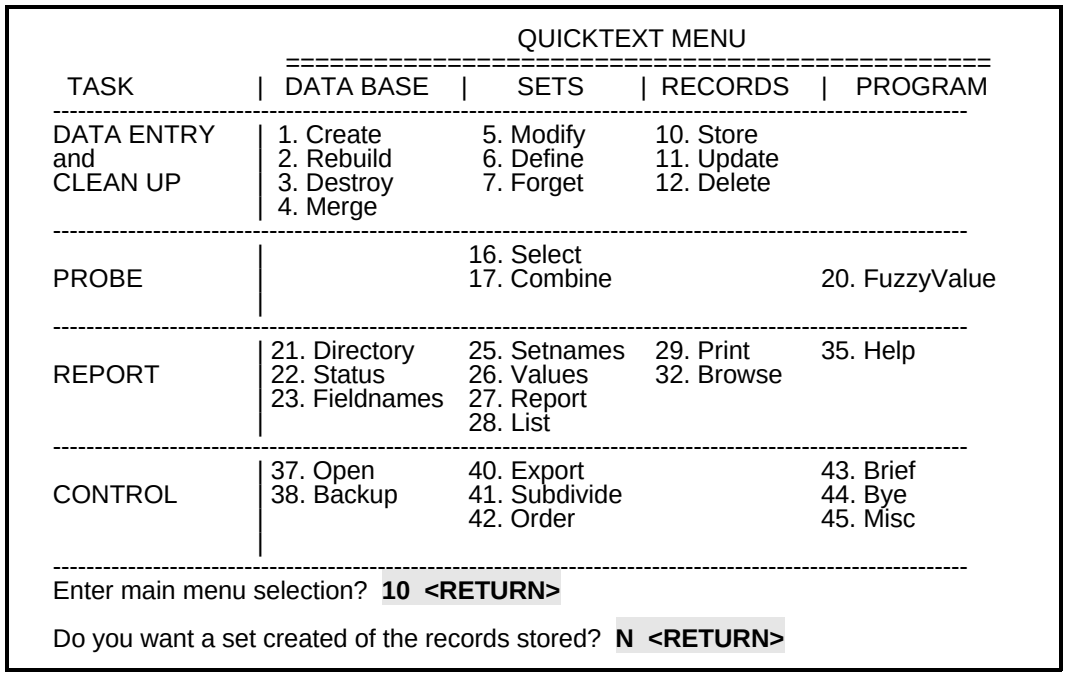
Screen 3.4

As you can see in Screen 3.5, the new data base indeed has 6 fields, each with the name, type, and width you specified. Press <RETURN> to continue. When a data base has one or more variable length fields defined and has at least one record stored (STORE will be discussed later in this lesson) in it, FIELDNAMES will at this point give you the opportunity to obtain additional information related to the variable length fields. Since no records have been stored in the FAMILY data base at this point, that prompt is skipped for now.

```
Fieldnames for FAMILY                      19-MAR-90 22:38:19

      Type          Width   Title

 1. NUMERIC           5    ITEM#
 2. CHARACTER         7    NAME
 3. NUMERIC           2    AGE
 4. CHARACTER         8    BIRTHDATE
 5. CHARACTER        21    FAVORITE SHOW
 6. VARIABLE               COMMENT

                        Press <RETURN> to continue <RETURN>
```

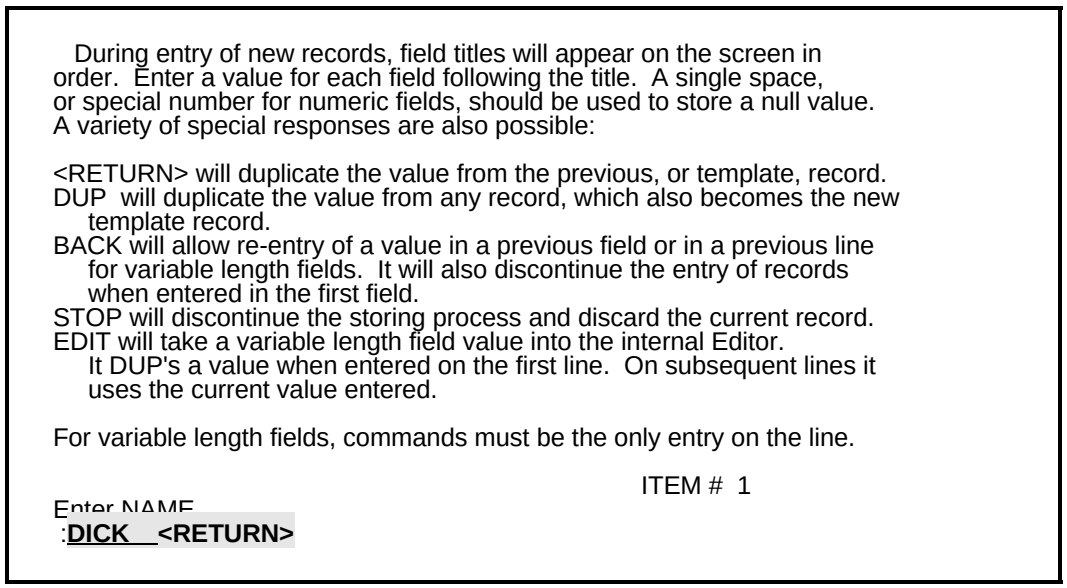
Screen 3.5

Now that you have verified the field definitions of the FAMILY data base, use the STORE (#10) menu item to put records into this new data base. You are asked if you want a set created of the records stored, which for this exercise answer no.



Screen 3.6

As shown in Screen 3.7, there are several special responses to the prompts in the STORE menu item. Read the descriptions carefully, and then try a couple of them during the storing process. The following screens show you step-by-step the process of storing the first record.



Screen 3.7

The screen will scroll upwards as each prompt is answered. Notice that for the variable length field titled "COMMENT" QUICKTEXT requires that you press <RETURN> on a line all by itself to indicate you have finished entering information into that field. If you want a field completely blank, enter one space, then press <RETURN> twice.

```
Enter AGE
 :43 <RETURN>
Enter BIRTHDATE
 :46/11/27 <RETURN>
Enter FAVORITE SHOW
 :60 MINUTES      <RETURN>
Enter COMMENT
? "I REALLY DISLIKE TAKING OUT THE GARBAGE.  PERHAPS I CAN TALK MY  <RETURN>
? TEENAGE SON FRED INTO TAKING OVER THAT CHORE." <RETURN>
? <RETURN>


                                                          ITEM #  2

Enter NAME
 :JANE   <RETURN>
```

Screen 3.8

Once you have finished entering the first record, use the same process to enter the next 3 records given below.

ITEM# = 2
NAME = JANE
AGE = 41
BIRTHDATE = 48/05/04
FAVORITE SHOW = PHIL DONOHUE
COMMENT = "JUNIOR, HOW MANY TIMES DO I HAVE TO TELL YOU..."

ITEM# = 3
NAME = MARY
AGE = 19
BIRTHDATE = 70/12/24
FAVORITE SHOW = MIAMI VICE
COMMENT = "I REALLY ENJOY COLLEGE SO FAR. BUT MY ROOMMATE IS WEIRD."

ITEM# = 4
NAME = JUNIOR
AGE = 5
BIRTHDATE = 84/06/29
FAVORITE SHOW = SESAME STREET
COMMENT = "BUT, MOM...!"

ITEM# = 5
NAME = FRED
AGE = 16
BIRTHDATE = 73/03/23
FAVORITE SHOW = MONDAY NIGHT FOOTBALL
COMMENT = "NO WAY, DAD. I'M NOT TAKING OUT THE GARBAGE."

As you enter the last record below, notice that the BIRTHDATE field for this record is the same as the BIRTHDATE for record #4.

ITEM# = 6
NAME = BETSY
AGE = 5
BIRTHDATE = 84/06/29
FAVORITE SHOW = BILL COSBY
COMMENT = "WHY CAN'T MY MOM AND DAD BE LIKE MR. AND MRS. HUXTABLE?"

As shown in Screen 3.9, enter DUP in order to duplicate the information in record 4, rather than type it in again. When asked to enter the item number of the template (the item number of the record you want to DUP from), enter 4. In the STORE menu item, the template record is normally the immediately preceding record. Thus, entering <RETURN> without having specified DUP will duplicate the value from the previous record. Once you specify DUP and chose a new template record, the new template record stays in effect for the rest of the record being stored. When you have finished entering the last field of the last record, enter BACK to end the storing process, as shown in Screen 3.9. You may not use BACK as a field value entry because this is used to stop the process of storing your information, you will then be returned to the main menu.

```
                                                          ITEM #  6
Enter NAME
 :BETSY   <RETURN>
Enter AGE
 :5  <RETURN>
Enter BIRTHDATE
 :DUP    <RETURN>
Enter item number of template?  4  <RETURN>
    BIRTHDATE
 :84/06/29
Enter FAVORITE SHOW
 :BILL COSBY    <RETURN>
Enter COMMENT
? "WHY CAN'T MY MOM AND DAD BE AS NICE AS HUXTABLE'S?"          <RETURN>
? <RETURN>


                                                          ITEM #  7
Enter NAME
 :BACK    <RETURN>
```

Screen 3.9

After creating a data base, you may decide to make a change in the definition of one or several fields. Using the REBUILD (#2) menu item you can add or delete specific fields, or re-define the name, width, and/or type of a field. For example, suppose you want to spell out the month of each person's birthdate rather than using the number for that month. This would require a wider field definition of 17 characters for the birthdate field.

The following screen shows you the process of changing field widths, which is only one of many options of the REBUILD function. Other REBUILD options will be discussed in subsequent lessons.

After selecting REBUILD from the main menu, you are prompted for the REBUILD option, 4 in this case, and then for the field number to be altered -- 4. The desired width is 17, and you do not want to change any other field widths at this time. This will take you back to the main menu.

```
                                 QUICKTEXT MENU
                     ===============================================
 TASK               | DATA BASE    |     SETS      | RECORDS   |   PROGRAM
---------------------------------------------------------------------------------
DATA ENTRY          | 1. Create        5. Modify     10. Store
and                 | 2. Rebuild       6. Define     11. Update
CLEAN UP            | 3. Destroy       7. Forget     12. Delete
                    | 4. Merge
---------------------------------------------------------------------------------
                    |                 16. Select
PROBE               |                 17. Combine                  20. FuzzyValue
                    |
---------------------------------------------------------------------------------
                    | 21. Directory   25. Setnames   29. Print     35. Help
REPORT              | 22. Status      26. Values     32. Browse
                    | 23. Fieldnames  27. Report
                    |                 28. List
---------------------------------------------------------------------------------
                    | 37. Open        40. Export                   43. Brief
CONTROL             | 38. Backup      41. Subdivide                44. Bye
                    |                 42. Order                    45. Misc
---------------------------------------------------------------------------------
Enter main menu selection? 2 <RETURN>
Do you want to:
     1) Add fields
     2) Delete fields
     3) Rename field titles
     4) Change field widths
     5) Change numeric field to alphanumeric
     6) Change alphanumeric field to numeric
     7) Variable file clean up
     8) Variable file expansion
? 4 <RETURN>

 2. NAME
 3. AGE
 4. BIRTHDATE
 5. FAVORITE SHOW
Enter number of field to be altered? 4 <RETURN>
The current width of BIRTHDATE
 is  8.  Enter the desired width? 17 <RETURN>
Do you want to change the width of another field? N <RETURN>
```

Screen 3.10

Once a field width or type has been changed, or if a field is added, it may be necessary to make changes in some or all of the records in the data base. This will be addressed in Lesson 4.

REBUILD is one of the most powerful commands because it allows you flexibility. You don't have to know absolutely what your data will be before you start organizing and entering it. If you run into a situation that doesn't fit your data base structure you can easily change the structure rather than arbitrarily force how the data is coded to fit in the existing structure.

Congratulations! You have just completed Lesson 3, in which you learned to use several of the most important menu items:

* using CREATE to create a new data base

* using FIELDNAMES to examine field definitions

* using STORE to store records into a new data base

* using REBUILD to re-define, add, or delete fields

If you would like to practice using these menu items, try creating a data base of names, addresses, and phone numbers of contact people; correspondence logging and tracking; or something of your own invention.

LESSON 4 - CHANGING INFORMATION IN YOUR DATA BASE

Lesson 4 demonstrates how to make changes in the information in a data base. You will be shown how to modify one field in several records, how to update any field in one record, and how to delete unwanted records from the data base.

In Lesson 3 you created a data base named "FAMILY" which contained 6 records and 6 fields. The width of field four (BIRTHDATE) was changed from 8 to 17 characters so that you could spell out the month of each person's birthdate. Now, you need to change the contents of the fourth field of each record by using the MODIFY (#5) menu item. MODIFY operates on one field for each record in either

a) the whole data base,
b) a set which was previously created (set creation will be discussed later), or
c) a list of consecutive records specified by the user.

In this lesson, you will use method a) above because each record in the data base needs to be changed. You will change the fourth field of each record in the data base. Begin by opening the FAMILY data base, and proceed as shown in the following screens.

```
                                  QUICKTEXT MENU
                    ===============================================
 TASK              | DATA BASE  |    SETS      | RECORDS   |  PROGRAM
-------------------------------------------------------------------------
DATA ENTRY         | 1. Create       5. Modify    10. Store
and                | 2. Rebuild      6. Define    11. Update
CLEAN UP           | 3. Destroy      7. Forget    12. Delete
                   | 4. Merge
-------------------------------------------------------------------------
                   |               16. Select
PROBE              |               17. Combine                20. FuzzyValue
                   |
-------------------------------------------------------------------------
                   | 21. Directory 25. Setnames  29. Print    35. Help
REPORT             | 22. Status    26. Values    32. Browse
                   | 23. Fieldnames 27. Report
                   |               28. List
-------------------------------------------------------------------------
                   | 37. Open      40. Export                 43. Brief
CONTROL            | 38. Backup    41. Subdivide              44. Bye
                   |               42. Order                  45. Misc
                   |
-------------------------------------------------------------------------
Enter main menu selection?  5  <RETURN>
```

Screen 4.1

After selecting the MODIFY (#5) menu item, press <RETURN> to edit the entire data base. Next, enter the number of the field to be edited, which in this case is Field 4 - BIRTHDATE. Then select the Manual editing mode because each record will have a

different birthdate and you will need to edit them individually. Other MODIFY modes will be discussed later (see MODIFY-Automatic later in this lesson; the editors in Lesson 7).

Next you will be prompted for the number of a field to be displayed during editing. The field to be changed, 4, is automatically displayed during the process. Specify an additional field to be displayed to assist you in verifying that you are modifying the correct record. This display field cannot be a variable length field, such as COMMENTS, even if the field being modified is a variable length field. In this case, it's not really necessary to specify a display field because the old value for Field 4 is sufficient data for verification. However, since it does not "hurt" to display extra information, specify 1 to have the ITEM# Field appear as the display field.

```
Enter the set to be edited, enter beginning item number to edit consecutive
records, or enter <RETURN> to edit entire data base? _____ <RETURN>

   2. NAME
   3. AGE
   4. BIRTHDATE
   5. FAVORITE SHOW
   6. COMMENT
Enter number of field to be edited?  4  <RETURN>
Enter editing mode desired:
      1) Manual (Records are edited one at a time)
      2) Automatic (All records are edited the same)
      3) Internal Editor
      4) External Editor
? 1  <RETURN>
Enter number of field to be displayed during editing?
(enter 0 for no field display)?  1  <RETURN>
```

Screen 4.2

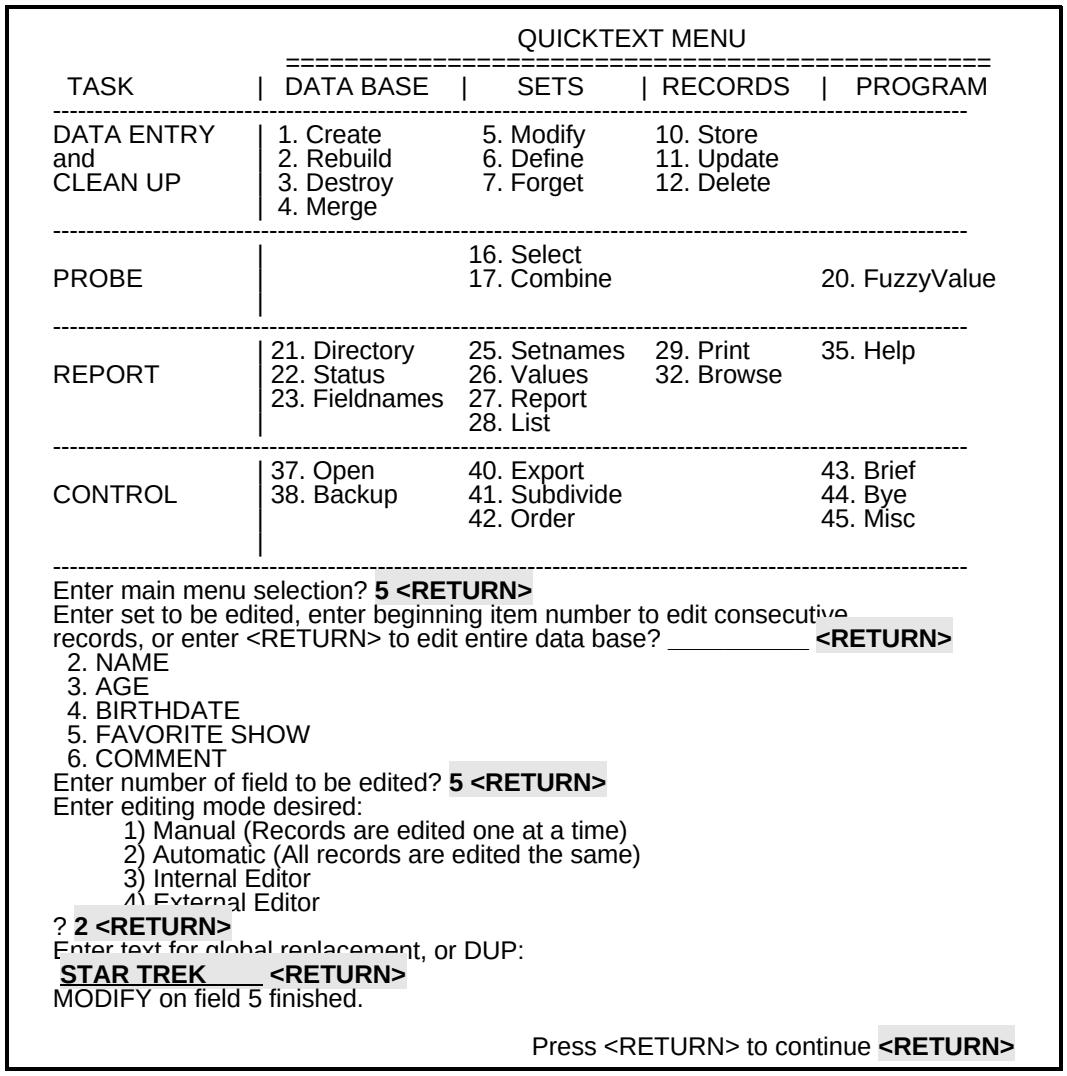
The screen will scroll upwards as each prompt is answered. Finally, as shown in Screen 4.3, you are shown the special responses that are possible, and are prompted for the modification for each record. Notice how BACK was used to correct a data entry error for Record 2. Also notice that the birthdate in Record 6 is the same as in Record 4. Enter DUP in order to duplicate the modification, and when asked to enter an item number (of the template record), enter 4. After the last record is modified, <RETURN> takes you back to the main menu.

```
   During manual editing, a variety of special responses are possible:

<RETURN> only will leave the current value unchanged.
BACK will allow re-entry of a value in the previous record or, if used in
    the first record will terminate the editing process.
STOP will terminate the editing process in the middle of a set, retaining
    all revisions up to the current record.
DUP  will duplicate the value from another record.  If the field is
    variable length, the internal Editor may be used after DUP.
EDIT will take a variable length field into the internal Editor.

For variable length fields, commands must be the only entry on the first line.

  1 46/11/27          NOVEMBER 27, 1946 <RETURN>
  2 48/05/04          MAY 44, 1948 <RETURN>
  3 70/12/24          BACK <RETURN>
  2 MAY 44, 1948      MAY 4, 1948 <RETURN>
  3 70/12/24          DECEMBER 24, 1970 <RETURN>
  4 84/06/29          JUNE 29, 1984 <RETURN>
  5 73/03/23          MARCH 23, 1973 <RETURN>
  6 84/06/29          DUP_ <RETURN>
Enter item number? 4 <RETURN>
        JUNE 29, 1984
MODIFY on field 4 finished.

                                Press <RETURN> to continue <RETURN>
```

Screen 4.3

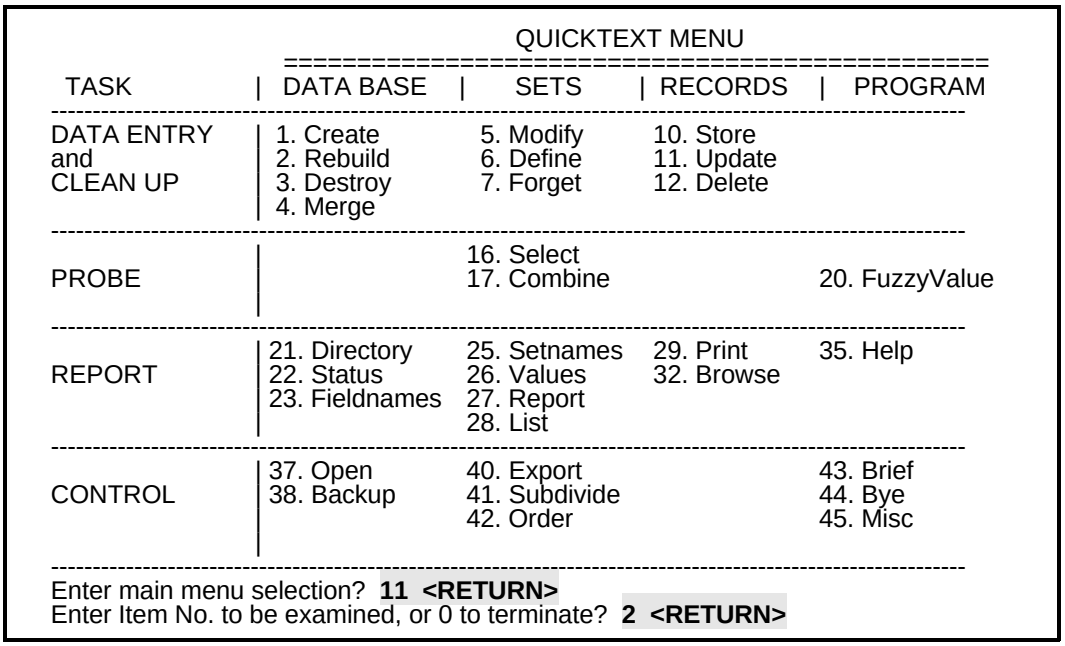
Now suppose you want to change the FAVORITE SHOW field of each record so that each contains "STAR TREK". This can be done using the Automatic mode of MODIFY. This mode allows you to change information in the same field of each record in the data base, the set specified, or a range of item numbers, while only having to type the change once. The following screen shows you the process of using the MODIFY (#5) - Automatic mode to change the FAVORITE SHOW field of each record so that each contains "STAR TREK".

Select MODIFY. Then press <RETURN> to edit the entire data base. Next, enter the number of the field to be edited, which is 5. Then select the Automatic editing mode, 2, so that all records will automatically be changed. Next you are asked to enter the text that will be used for the global replacement, or DUP. Enter "STAR TREK". If you had wanted to duplicate a FAVORITE SHOW that already exists in one of the records, you could have entered DUP, followed by the item number of the template record. When the change has been finished, a message will print and <RETURN> will take you to the main menu.



Screen 4.4

QUICKTEXT offers another method of changing the contents of records. UPDATE (#11) can be used in a way similar to MODIFY. As stated previously, MODIFY is used to change one field of several records at a time. On the other hand, UPDATE works on only one record at a time; but any or all fields within that record may be changed during the same UPDATE. Suppose you want to change the ages of those people in the FAMILY data base that have celebrated their birthdays this year. Assuming that today is June 1, 1989, changes must be made in Field 3 (AGE) of Records 2 and 5. At the same time, change the FAVORITE SHOW for these two records to "COACH". The following screens illustrate the use of UPDATE to make the changes in these records.



Screen 4.5

The screen will scroll upwards throughout this process. Select UPDATE on item number 2. You are shown the contents of Record 2, and asked if you want to modify the record. When you answer yes, a set of instructions will be displayed, along with the first field of Record 2. You are then prompted for the new value for the field. Press <RETURN>, which leaves the value unchanged, for Field 2. When prompted for the new value of Field 3, type in the updated age, 42. Press <RETURN> for Field 4 to leave it unchanged, enter a new value of "COACH" and press <RETURN> for Field 5, and press <RETURN> for Field 6 to leave it as it was.

```
ITEM#=    2
NAME=JANE
AGE=41
BIRTHDATE=MAY 4, 1948
FAVORITE SHOW=STAR TREK
COMMENT="JUNIOR, HOW MANY TIMES DO I HAVE TO TELL YOU..."
Do you want to modify this record? Y <RETURN>

To leave a value unchanged, press <RETURN>.  To modify, enter correct
data.  To duplicate a value from another record, type DUP.  To backup
to the previous field, type BACK.  To edit a variable length field in
the Editor, type EDIT.                                    Item #  2

NAME=JANE
Enter new value:
_____ <RETURN>

AGE=41
Enter new value:
42 <RETURN>

BIRTHDATE=MAY 4, 1948
Enter new value:
_____ <RETURN>

FAVORITE SHOW=STAR TREK
Enter new value:
COACH_____ <RETURN>

COMMENT="JUNIOR, HOW MANY TIMES DO I HAVE TO TELL YOU..."
Enter new variable length data:
<RETURN>
```

Screen 4.6

When you have finished updating Item 2, you will be asked if you want to examine another record. As shown in Screen 4.7, answer yes in order to examine and modify Item 5. The contents of Record 5 will be displayed and again you will be asked if you would like to modify this record, which you do.

As you did for Record 2, press <RETURN> for Field 2, update Field 3, and press <RETURN> for Field 4. Enter DUP in Field 5 to duplicate the information from template Record 2. Press <RETURN> to leave Field 6 unchanged. This process is shown in Screen 4.7. When you have finished updating this record, you will be asked if you want to examine another record. Answer no and you will be returned to the main menu.

```
Do you want to examine another record? Y <RETURN>
Enter Item No. to be examined, or 0 to terminate? 5 <RETURN>

ITEM#=    5
NAME=FRED
AGE=16
BIRTHDATE=MARCH 23, 1973
FAVORITE SHOW=STAR TREK
COMMENT="NO WAY, DAD.  I'M NOT TAKING OUT THE GARBAGE."
Do you want to modify this record? Y <RETURN>


To leave a value unchanged, press <RETURN>.  To modify, enter correct
data.  To duplicate a value from another record, type DUP.  To backup
to the previous field, type BACK.  To edit a variable length field in
the Editor, type EDIT.                                    Item #  5

NAME=FRED
Enter new value:
_______ <RETURN>

AGE=16
Enter new value:
17 <RETURN>

BIRTHDATE=MARCH 23, 1973
Enter new value:
_____ <RETURN>

FAVORITE SHOW=STAR TREK
Enter new value:
DUP_____ <RETURN>
Enter item number of template? 2 <RETURN>
COACH

COMMENT="NO WAY, DAD.  I'M NOT TAKING OUT THE GARBAGE."
Enter new variable length data:
<RETURN>
Do you want to examine another record? N <RETURN>
```

Screen 4.7

To verify that the changes you made are correct, use the BROWSE (#32) menu item (which was discussed in Lesson 2) to look at the contents of Items 2 and 5. Compare your results with Screen 4.8. Notice that the BROWSE (#32) and UPDATE (#11) menu items produce an identical sequence of prompts. They are listed as two separate menu items for clarity because of the way the main menu is organized by task.

```
                              QUICKTEXT MENU
                  =============================================
 TASK          |  DATA BASE   |      SETS      | RECORDS     |   PROGRAM
--------------------------------------------------------------------------
DATA ENTRY     | 1. Create       5. Modify       10. Store
and            | 2. Rebuild      6. Define       11. Update
CLEAN UP       | 3. Destroy      7. Forget       12. Delete
               | 4. Merge
--------------------------------------------------------------------------
               |                16. Select
PROBE          |                17. Combine                   20. FuzzyValue
               |
--------------------------------------------------------------------------
               |21. Directory   25. Setnames    29. Print     35. Help
REPORT         |22. Status      26. Values      32. Browse
               |23. Fieldnames  27. Report
               |                28. List
--------------------------------------------------------------------------
               |37. Open        40. Export                    43. Brief
CONTROL        |38. Backup      41. Subdivide                 44. Bye
               |                42. Order                     45. Misc
               |
--------------------------------------------------------------------------
Enter main menu selection? 32 <RETURN>
Enter Item No. to be examined, or 0 to terminate? 2 <RETURN>

ITEM#=    2
NAME=JANE
AGE=42
BIRTHDATE=MAY 4, 1948
FAVORITE SHOW=COACH
COMMENT="JUNIOR, HOW MANY TIMES DO I HAVE TO TELL YOU..."
Do you want to modify this record? N <RETURN>
Do you want to examine another record? Y <RETURN>
Enter Item No. to be examined, or 0 to terminate? 5 <RETURN>

ITEM#=    5
NAME=FRED
AGE=17
BIRTHDATE=MARCH 23, 1973
FAVORITE SHOW=COACH
COMMENT="NO WAY, DAD.  I'M NOT TAKING OUT THE GARBAGE."
Do you want to modify this record? N <RETURN>
Do you want to examine another record? N <RETURN>
```

Screen 4.8

Just as STORE is used to add records (as discussed in Lesson 3), the DELETE (#12) menu item is used to erase unwanted records from a data base. When a record is deleted, however, all subsequent records will be renumbered and all sets will be deleted. The user cannot control the renumbering process once a record is deleted.

If deleting the sets in a data base is undesirable, you can flag the unwanted records and re-use them. This can be done by using UPDATE to put new information in the old, unwanted records instead of storing new records when records need to be added to the data base.

An alternate method of getting rid of unwanted records exists. However, it is more sophisticated and requires using the SUBDIVIDE menu item, which will be discussed in Lesson 6.

To illustrate the use of DELETE, suppose that you want to erase the record for Mary, the daughter who went off to college. The following screens show the sequence for using the DELETE menu item.

```
                                   QUICKTEXT MENU
                    ==============================================
 TASK          | DATA BASE    |    SETS      | RECORDS    |   PROGRAM
-------------------------------------------------------------------------
DATA ENTRY     | 1. Create        5. Modify     10. Store
and            | 2. Rebuild       6. Define     11. Update
CLEAN UP       | 3. Destroy       7. Forget     12. Delete
               | 4. Merge
-------------------------------------------------------------------------
               |               16. Select
PROBE          |               17. Combine                  20. FuzzyValue
               |
-------------------------------------------------------------------------
               |21. Directory  25. Setnames   29. Print     35. Help
REPORT         |22. Status     26. Values     32. Browse
               |23. Fieldnames 27. Report
               |               28. List
-------------------------------------------------------------------------
               |37. Open       40. Export                   43. Brief
CONTROL        |38. Backup     41. Subdivide                44. Bye
               |               42. Order                    45. Misc
               |
-------------------------------------------------------------------------
Enter main menu selection?  12  <RETURN>
```

Screen 4.9

You are asked to enter the item number to be deleted, which in this case is 3. Next, the contents of this record is displayed and you are asked to confirm your decision to delete this record to which you will reply yes. You are then asked if you want to delete another record, which you do not. A bell is heard and you are warned that if you continue all subsequent records will be renumbered and all sets will be deleted. Answer yes to continue and then press <RETURN> to get back to the main menu.

```
Enter Item No. to be deleted, or 0 to terminate? 3 <RETURN>
NAME=MARY
AGE=19
BIRTHDATE=DECEMBER 24, 1970
FAVORITE SHOW=STAR TREK
COMMENT="I REALLY ENJOY COLLEGE.  BUT MY ROOMMATE IS WEIRD."


Is this the record you want to delete? Y <RETURN>

Do you want to delete another record? N <RETURN>
Warning!  If you continue, all records with item numbers above 3
will be renumbered, and all sets will be forgotten.
Are you sure you want to continue? Y <RETURN>
 1 records deleted.

                                  Press <RETURN> to continue <RETURN>
```

Screen 4.10

Congratulations! You have completed Lesson 4 of the QUICKTEXT Self-Taught Training Package. In this lesson you learned how to:

* modify a field in all records of a data base using MODIFY-Manual and MODIFY-Automatic

* update fields within a single record using UPDATE

* erase an unwanted record from a data base using DELETE

Before going on the Lesson 5, which begins the intermediate level of this package, you may want to use the menu items that have already been discussed to create, examine, and manipulate a couple of simple data bases of your own.

LESSON 5 - PROBING FOR SETS OF RELATED INFORMATION

Lesson 5 demonstrates how to list the unique values occurring in a field, how to use Boolean expressions to create sets of records, and how to define a set based on item numbers.

Two of the menu items that will be discussed in this lesson deal with KEYS type fields. A KEYS type field allows multiple values to be stored in a single field of a record. The field must be either fixed length alphanumeric or variable length. When the field is created, nothing special needs to be done for it to be a KEYS type field. However, it must be large enough to hold the longest combination of KEYwords expected. (Remember REBUILD (#2) as discussed in Lesson 3, could be used to expand the field width if you discover you made the field too narrow.) When values are stored in the field, the individual values must be separated with a consistent delimiter, such as a comma or a slash. This allows the individual values to be recognized and counted during a search of that field. For more information on KEYS type fields, refer to your QUICKTEXT User's Manual.

In this lesson you will be using the SPECIES data base. Open the SPECIES data base and use the REPORT menu item to look at the whole data base, all fields, on the screen. Notice that the STATE field is a KEYS type field, with a "/" as the delimiter. All other fields in the SPECIES data base are non-KEYS type fields.

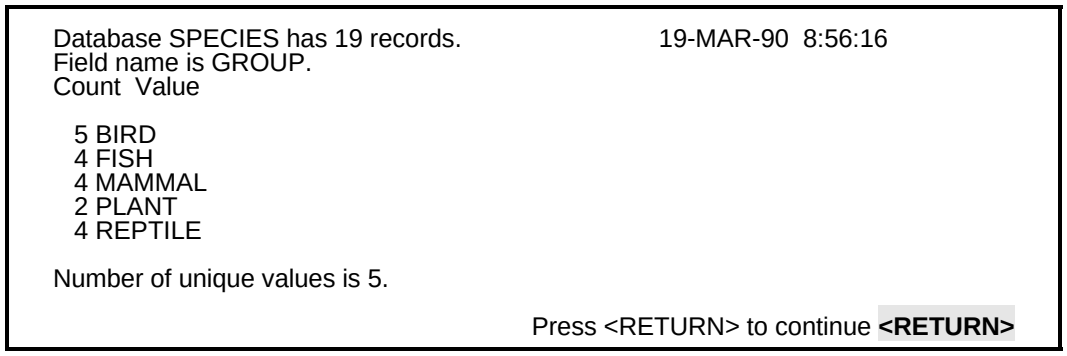
It is often desirable to group related information together, or in other words, to group records into sets. Once the records of a data base are stored, you can use the VALUES (#26) menu item to get a listing of all unique values occurring in a field, along with the number of times each value occurs. This can be done for the entire data base or for a set of records. Using VALUES may help you decide which records to group into sets, based on some common value in a particular field.

To see an example of VALUES applied to a non-KEYS type field in an entire data base, begin by opening the SPECIES data base, if you have not already done so, and choose the VALUES menu item. You are asked to enter the name of the set, or <RETURN> for the full data base. Press <RETURN>. Next you are asked to enter the field number whose values are to be listed. Suppose you want a list and count of the values in the fourth field, named GROUP. Enter a 4. Answer no when asked if upper and lower case values should be equivalent. Next you are asked if this is a KEYS field, which it is not (the STATE field is the only KEYS field, as determined previously). Finally, you are asked where you want the listing. Enter 1 to display the listing on the screen.

```
                                  QUICKTEXT MENU
                  ===============================================
 TASK          |  DATA BASE  |     SETS      | RECORDS   |   PROGRAM
-----------------------------------------------------------------------
DATA ENTRY     | 1. Create      5. Modify     10. Store
and            | 2. Rebuild     6. Define     11. Update
CLEAN UP       | 3. Destroy     7. Forget     12. Delete
               | 4. Merge
-----------------------------------------------------------------------
               |             16. Select
PROBE          |             17. Combine                  20. FuzzyValue
               |
-----------------------------------------------------------------------
               |21. Directory 25. Setnames   29. Print    35. Help
REPORT         |22. Status    26. Values     32. Browse
               |23. Fieldnames 27. Report
               |             28. List
-----------------------------------------------------------------------
               |37. Open     40. Export                   43. Brief
CONTROL        |38. Backup   41. Subdivide                44. Bye
               |             42. Order                    45. Misc
               |
-----------------------------------------------------------------------
Enter main menu selection? 26 <RETURN>

Field values may be reported for the entire database
or the records of a set.  Enter the name of the set,
or <RETURN> for the full database? __________ <RETURN>

 2. SCIENTIFIC NAME
 3. COMMON NAME
 4. GROUP
 5. STATE
 6. STATUS
 7. TASK CODE
Enter the field number whose values are to be listed? 4 <RETURN>
Should upper and lower case values be equivalent? N <RETURN>
Is this a KEYS type field? N <RETURN>
Where do you want this listing?      1) Screen
                                     2) Printer
? 1 <RETURN>
```

Screen 5.1

As you can see in Screen 5.2, VALUES listed the unique values occurring in the fourth field and the number of times each value occurs. If a record had a keyword "bird" or "Bird" in the GROUP field, "bird" or "Bird" would have been listed as a separate value in this table because you told QUICKTEXT to not treat upper and lower case values as equivalent in Screen 5.1. Therefore, when doing a VALUES, if you want QUICKTEXT to convert all values to upper case (BIRD=bird=Bird) before counting them, specify yes for case equivalency. Press <RETURN> to get back to the main menu.



Screen 5.2

To see an example of VALUES applied to a KEYS type field of the records in a set, suppose you want to list all unique values occurring in the STATE field of the records in the set FISH. Begin by selecting the VALUES menu item. Enter FISH for the name of the set. Next, enter the field number whose values are to be listed - 5. This time specify yes for case equivalency. When asked if this is a KEYS type field answer yes. The delimiter character, as determined earlier, is "/". Enter 1 to display the listing on the screen.

```
                              QUICKTEXT MENU
                  ===========================================
  TASK           | DATA BASE   |    SETS      | RECORDS    |   PROGRAM
-------------------------------------------------------------------------
DATA ENTRY       | 1. Create      5. Modify     10. Store
and              | 2. Rebuild     6. Define     11. Update
CLEAN UP         | 3. Destroy     7. Forget     12. Delete
                 | 4. Merge
-------------------------------------------------------------------------
                 |              16. Select
PROBE            |              17. Combine                 20. FuzzyValue
                 |
-------------------------------------------------------------------------
                 |21. Directory 25. Setnames  29. Print     35. Help
REPORT           |22. Status    26. Values    32. Browse
                 |23. Fieldnames 27. Report
                 |              28. List
-------------------------------------------------------------------------
                 |37. Open      40. Export                  43. Brief
CONTROL          |38. Backup    41. Subdivide               44. Bye
                 |              42. Order                   45. Misc
-------------------------------------------------------------------------
Enter main menu selection? 26 <RETURN>

Field values may be reported for the entire database
or the records of a set.  Enter the name of the set
or <RETURN> for the full database? FISH    <RETURN>

  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter the field number whose values are to be listed? 5 <RETURN>
Should upper and lower case values be equivalent? Y <RETURN>
Is this a KEYS type field? Y <RETURN>
What is the delimiter character? / <RETURN>
Where do you want this listing?        1) Screen
                                       2) Printer
? 1 <RETURN>
```

Screen 5.3

Screen 5.4 shows the unique values that exist in the STATE Field of the records in the set FISH. Notice the phrase "(with conversion to upper case)" has been included in the title since you requested that all values were converted to upper case (e.g. upper and lower case are equivalent) in Screen 5.3. Press <RETURN> to get back to the main menu.

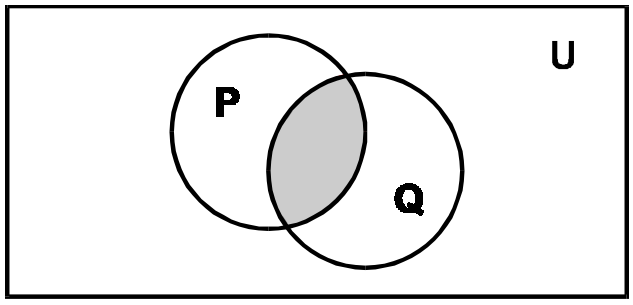
```
Data base SPECIES, set FISH has 4 records.          19-MAR-90  9:34:35
Field name is STATE, key delimiter is /.
Count  Value (with conversion to upper case)

  2 NC
  1 SC
  3 TN

Number of unique values is 3.

                              Press <RETURN> to continue <RETURN>
```

Screen 5.4

Now let's switch from examining existing sets to a discussion of how to form your own sets. One menu item that allows you to form sets is SELECT (#16). This menu item has two parts. In Part 1, you define conditions, which are also referred to as operands. In Part 2, you combine the conditions into a Boolean expression using operators (AND, OR, NOT). QUICKTEXT uses the operands and operators to form a set whose characteristics match the description you specified in the Boolean expression.

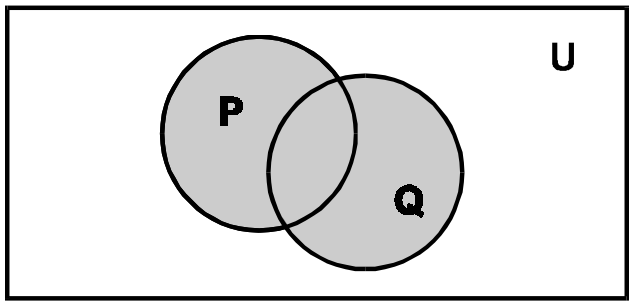
Boolean operators (AND, OR, NOT) can be explained using the following diagrams, where:

U = the universal set; all records in the data base
P = records possessing condition P
Q = records possessing condition Q



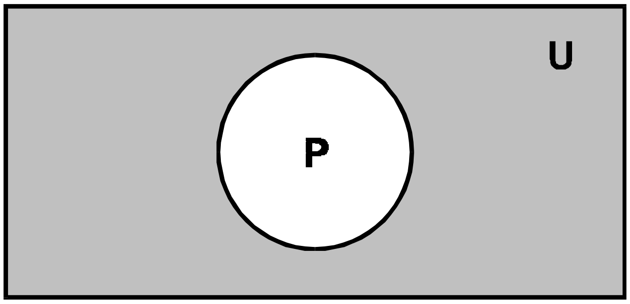
The intersection of a condition P and a condition Q (written P.AND.Q) is the set of all elements in U which are in both P and Q.

Figure 5.1 The intersection between two conditions. P AND Q is the set shown by the shaded area.



The union of a condition P and a condition Q (written P.OR.Q) is the set of all elements in U which are in either P or Q or both.

Figure 5.2 The union of two conditions. P OR Q is the set shown by the shaded area.



The complement of a condition P (written .NOT.P) is the set of all elements in U which are not in P.

Figure 5.3 The complement of a condition. NOT P is the set shown by the shaded area.

To see an example of the SELECT menu item, suppose you want to create a set of those records in the SPECIES data base pertaining to the state of Kentucky (KY). The sequence for creating this set, which you will name KY, is shown in the following screens. Begin by selecting the SELECT menu item.

```
                                 QUICKTEXT MENU
                    ==================================================
 TASK             | DATA BASE    |     SETS      | RECORDS     |  PROGRAM
---------------------------------------------------------------------------
DATA ENTRY        | 1. Create       5. Modify      10. Store
and               | 2. Rebuild      6. Define      11. Update
CLEAN UP          | 3. Destroy      7. Forget      12. Delete
                  | 4. Merge
---------------------------------------------------------------------------
                  |               16. Select
PROBE             |               17. Combine                   20. FuzzyValue
                  |
---------------------------------------------------------------------------
                  |21. Directory  25. Setnames   29. Print      35. Help
REPORT            |22. Status     26. Values     32. Browse
                  |23. Fieldnames 27. Report
                  |               28. List
---------------------------------------------------------------------------
                  |37. Open       40. Export                    43. Brief
CONTROL           |38. Backup     41. Subdivide                 44. Bye
                  |               42. Order                     45. Misc
---------------------------------------------------------------------------
Enter main menu selection? 16 <RETURN>
```

Screen 5.5

As you see in Screen 5.6, you must then choose a field to be used in the selection process. Since you want records pertaining to the state of KY, choose Field 5. Next you are asked to enter a relation. The abbreviations on the screen stand for the following:

EQ = equal to	GE = greater than or equal to
LT = less than	NE = not equal to
GT = greater than	CS = contains string
LE = less than or equal to	

Because STATE is a KEYS type field, you must use the CS relation. Next you are asked to enter a value, which is KY. In the SPECIES data base all data is entered in upper case so answering yes or no to the case equivalency prompt will make no difference. However, normally when entering data into a data base you may choose to enter your data in either upper or lower case or as a mixture of both cases. When asked "Should search consider upper and lower case equivalent?", if you are not sure if the data is upper or lower case or if you know the data contains both upper and lower case letters, answer this prompt with Yes. Even if you know your data is all entered in the same case, it does not hurt to answer this prompt Yes. By answering yes to the case equivalency prompt in a SELECT, you will always be sure of selecting all the desired records. Because of this, yes is the default answer to this prompt. To terminate the selection process, enter O.

```
The first step in creating a set requires choosing one or more
fields to be used in the selection process.

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter a field number from the above list, or zero to terminate? 5 <RETURN>
Enter a relation: EQ,LT,GT,LE,GE,NE,CS? CS <RETURN>
Enter a value? KY <RETURN>
Should search consider upper and lower case equivalent? Y <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE

Enter a field number from the above list, or zero to terminate? 0 <RETURN>
```

Screen 5.6

The screen will scroll upwards as each prompt is answered. The condition you specified (STATE contains the string KY) is displayed. Then you are asked to enter a Boolean expression. Since you have specified only one condition, no operator is needed, so enter A. You are shown how many records were selected to be in the set, and are asked to name the new set. Name this set KY. You will then be returned to the main menu.

```
        Current Conditions:
A. STATE CS KY
Enter a Boolean expression, using conditions A through A as operands,
and .NOT.(-), .AND.(*), and .OR.(+) as operators.  Use parentheses to
override this default order in which operations are performed.
? A <RETURN>

 6 records selected.  What do you want to call this set? KY    <RETURN>
```

Screen 5.7

Now, suppose you want to create a set of records that pertain to endangered species in the state of KY. When you choose the SELECT menu item, the current conditions that have been specified during the current QUICKTEXT session are displayed. Presently, there is only one - STATE CS KY. You are then asked if you want to keep the current conditions. Answer yes, because you will need the STATE CS KY condition to create the new set. You should also answer yes when asked if you want to add more conditions. Next, you are asked to enter a field number. Enter 6 because you want to select the records that pertain to the status of the species - endangered. Then you are asked to enter a relation. Enter EQ because STATUS is not a KEYS type field. Next, you are asked to enter a value, which you should answer ENDANGERED. The EQ relation is very sensitive, which requires that you type in exactly what is to be selected. The exception is upper/lower case which is handled by the next prompt. For example, if you typed in END instead of ENDANGERED, the EQ relation would not select records containing ENDANGERED. EQ would only select records that contain END in the STATUS Field. Answer yes to treat upper case and lower case as equivalent. Finally, enter 0 to terminate the selection process.

```
Enter main menu selection?  16 <RETURN>

              Current Conditions
A.  STATE CS KY

Do you want to keep the above condition?  Y  <RETURN>
Do you want to add more conditions?  Y  <RETURN>

   1.  ITEM#
   2.  SCIENTIFIC NAME
   3.  COMMON NAME
   4.  GROUP
   5.  STATE
   6.  STATUS
   7.  TASK CODE

Enter a field number from the above list, or 0 to terminate?  6  <RETURN>
Enter a relation : EQ  LT  GT  LE  GE  NE  CS?  EQ  <RETURN>
Enter a value?  ENDANGERED  <RETURN>
Should search consider upper and lower case equivalent?   <RETURN>

   1.  ITEM#
   2.  SCIENTIFIC NAME
   3.  COMMON NAME
   4.  GROUP
   5.  STATE
   6.  STATUS
   7.  TASK CODE

Enter a field number from the above list, or zero to terminate?  0  <RETURN>
```

Screen 5.8

The current conditions will again be displayed including the new condition STATUS EQ ENDANGERED. Next you are asked to enter the Boolean expression. You want only those records that satisfy both condition A and condition B, so use the .AND. operator. Notice that the operator must be "surrounded" by periods. Finally you are shown the number of records selected, and you are asked to name the set. Name this set KYENDANG. You will then be returned to the main menu.

```
        Current Conditions:
A. STATE CS KY
B. STATUS EQ ENDANGERED
Enter a Boolean expression, using conditions A through B as operands,
and .NOT.(-), .AND.(*), and .OR.(+) as operators.  Use parentheses to
override this default order in which operations are performed.
? A.AND.B <RETURN>

 6 records selected.  What do you want to call this set? KYENDANG   <RETURN>
```

Screen 5.9

To become more familiar with the SELECT menu item and Boolean expressions, create a set of records pertaining to endangered species in Kentucky or Tennessee (TN). When you choose the SELECT menu item, the current conditions will be displayed. You want to keep these conditions and add more. Then specify the condition of STATE CS TN by selecting a field number, 5; a relation, CS; and a value, TN. Answer yes to treat upper and lower case as equivalent and enter 0 to terminate this process.

```
Enter main menu selection? 16 <RETURN>
        Current Conditions:
A. STATE CS KY
B. STATUS EQ ENDANGERED

Do you want to keep the above conditions? Y <RETURN>
Do you want to add more conditions? Y <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter a field number from the above list, or zero to terminate? 5 <RETURN>
Enter a relation: EQ,LT,GT,LE,GE,NE,CS? CS <RETURN>
Enter a value? TN <RETURN>
Should search consider upper and lower case equivalent? Y <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter a field number from the above list, or zero to terminate? 0 <RETURN>
```

Screen 5.10

The current conditions will again be displayed, including the new condition STATE CS TN. Next you are asked to enter the Boolean expression. You want records that satisfy condition B and either condition A or condition C. You will need to use more than one operator, as shown in Screen 5.11. Notice the use of parentheses, which indicate which operation in the Boolean expression will be performed first. Parentheses also allow you to override the usual order of operations - NOT, AND, then OR. Finally, you are shown the number of records selected and you are asked to name the set. Name this set ENKYORTN. You will then be returned to the main menu.

```
        Current Conditions:
A. STATE CS KY
B. STATUS EQ ENDANGERED
C. STATE CS TN
Enter a Boolean expression, using conditions A through C as operands,
and .NOT.(-), .AND.(*), and .OR.(+) as operators.  Use parentheses to
override this default order in which operations are performed.
? B.AND.(A.OR.C) <RETURN>

 8 records selected.  What do you want to call this set? ENKYORTN  <RETURN>
```

Screen 5.11

You can verify the creation of these three new sets by using the SETNAMES (#25) menu item (which was discussed in Lesson 2) and sending the listing to the screen. As you can see in Screen 5.12, the sets KY, KYENDANG, and ENKYORTN were created. You are shown when they were created, how many records are in each, and that they were created using SELECT. Press <RETURN> to get back to the main menu.

If you would like to view these new sets, use the REPORT (#27) menu item, which was discussed in Lesson 2. Otherwise, continue with this lesson.

```
The current time is  19-MAR-90 10:57:14
Data base name is SPECIES.  Created  3-OCT-81  8:26.  Updated  5-MAR-90  9:54
The data base contains 20 records, 8 sets, and occupies 2.8 kilobytes.
 1% of the disk space allocated to variable length data is used.
There are 215 kilobytes remaining on B:\

Setname                 Created          Size      Creator

BIRD                  10-FEB-87  9:04       5       Select
ENKYORTN              19-MAR-90 10:53       8       Select
FISH                  10-FEB-87  9:03       4       Select
KY                    19-MAR-90 10:47       6       Select
KYENDANG              19-MAR-90 10:49       6       Select
MAMMAL                10-FEB-87  9:05       5       Select
PLANT                 10-FEB-87  8:09       2       Select
REPTILE               10-FEB-87  9:02       4       Select


                                  Press <RETURN> to continue <RETURN>
```

Screen 5.12

The COMBINE (#17) menu item can be used to "Boolean" two or more existing sets together to make another set. This menu item works similarly to the SELECT menu item, but it uses setnames as the operands rather than conditions. Using two sets that currently exist, BIRD and KYENDANG, use the COMBINE menu item to make a third set of all endangered species in KY that are birds.

You are asked to enter a Boolean expression using setnames and operators. Notice that

- `-` can be used as shorthand for the .NOT. operator
- `*` can be used as shorthand for the .AND. operator
- `+` can be used as shorthand for the .OR. operator

Since you want records pertaining only to both sets, use the "*" (AND) operator. Call the new set BIRDKYEN. You will then be returned to the main menu.

```
                                QUICKTEXT MENU
                    ================================================
 TASK            | DATA BASE  |     SETS      | RECORDS    |  PROGRAM
-----------------------------------------------------------------------------
DATA ENTRY       | 1. Create      5. Modify     10. Store
and              | 2. Rebuild     6. Define     11. Update
CLEAN UP         | 3. Destroy     7. Forget     12. Delete
                 | 4. Merge
-----------------------------------------------------------------------------
                 |               16. Select
PROBE            |               17. Combine                  20. FuzzyValue
                 |
-----------------------------------------------------------------------------
                 | 21. Directory 25. Setnames   29. Print     35. Help
REPORT           | 22. Status    26. Values     32. Browse
                 | 23. Fieldnames 27. Report
                 |               28. List
-----------------------------------------------------------------------------
                 | 37. Open      40. Export                   43. Brief
CONTROL          | 38. Backup    41. Subdivide                44. Bye
                 |               42. Order                    45. Misc
                 |
-----------------------------------------------------------------------------
Enter main menu selection? 17 <RETURN>

Enter a Boolean expression, using setnames as operands, and
.NOT.(-), .AND.(*), and .OR.(+) as operators.  Use parentheses to
override this default order in which operations are performed.
? BIRD*KYENDANG <RETURN>

What do you want to call the resultant set of 3 records? BIRDKYEN  <RETURN>
```

Screen 5.13

For another example of the COMBINE menu item, suppose you want to make a set of all endangered species in KY that are not birds. Using the KYENDANG and BIRD sets, enter a Boolean expression using the ".AND..NOT." operator, as shown in Screen 5.14. Name the new set KYENDNB. You will then be returned to the main menu.

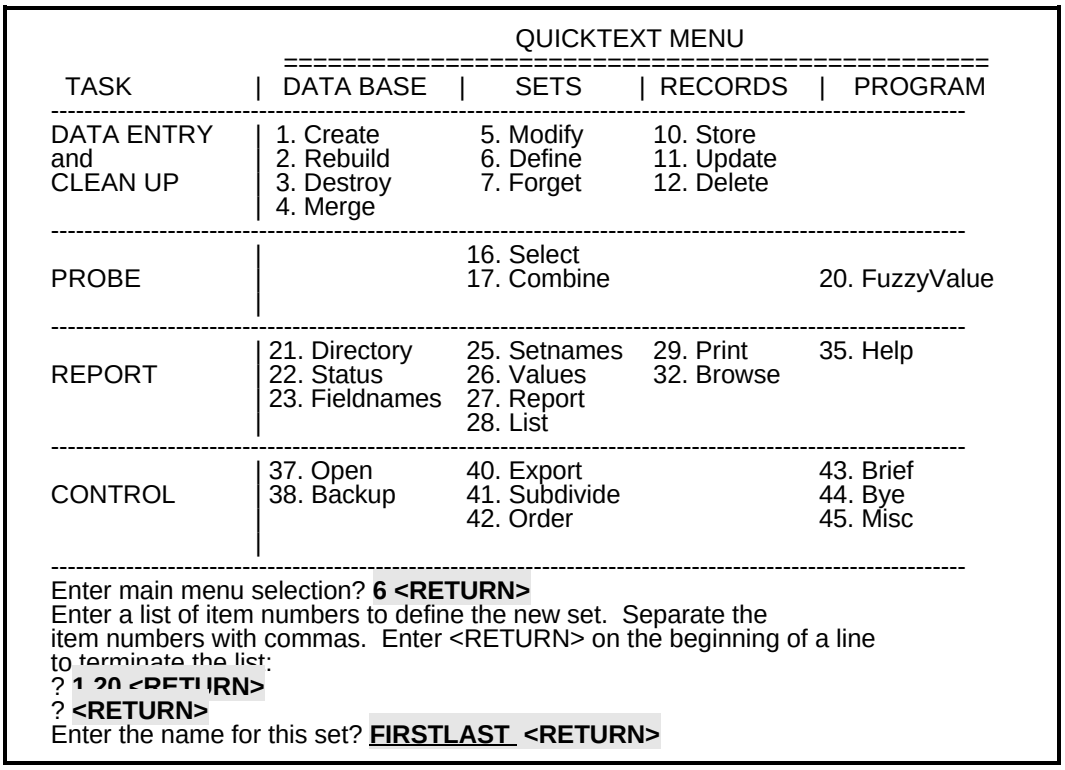
Creating sets of records can quickly become confusing. Remember to keep things simple by creating intermediate sets, and then combining them to create the complex result desired.

```
                                  QUICKTEXT MENU
                         ================================================
 TASK              |  DATA BASE   |      SETS      | RECORDS   |  PROGRAM
------------------------------------------------------------------------------
DATA ENTRY         | 1. Create         5. Modify     10. Store
and                | 2. Rebuild        6. Define     11. Update
CLEAN UP           | 3. Destroy        7. Forget     12. Delete
                   | 4. Merge
------------------------------------------------------------------------------
                   |                16. Select
PROBE              |                17. Combine                  20. FuzzyValue
                   |
------------------------------------------------------------------------------
                   |21. Directory   25. Setnames   29. Print     35. Help
REPORT             |22. Status      26. Values     32. Browse
                   |23. Fieldnames  27. Report
                   |                28. List
------------------------------------------------------------------------------
                   |37. Open        40. Export                   43. Brief
CONTROL            |38. Backup      41. Subdivide                44. Bye
                   |                42. Order                    45. Misc
                   |
------------------------------------------------------------------------------

Enter main menu selection? 17 <RETURN>

Enter a Boolean expression, using setnames as operands, and
.NOT.(-), .AND.(*), and .OR.(+) as operators.  Use parentheses to
override this default order in which operations are performed.
? KYENDANG.AND..NOT.BIRD <RETURN>

What do you want to call the resultant set of 3 records? KYENDNB   <RETURN>
```

Screen 5.14

Another menu item which can be used to create sets is the DEFINE (#6) menu item. DEFINE creates sets based on the item numbers of records. It is used mainly to create small sets, particularly if the records do not have field characteristics in common, such as the first and last records of the data base.

Screen 5.15 shows the use of DEFINE to create a set made up of the first and last records of the SPECIES data base. Assume that you used the STATUS menu item (discussed in Lesson 2) to determine there are 20 records in the SPECIES data base. Select DEFINE, enter the item numbers 1 and 20 separated by commas, press <RETURN>, then press <RETURN> again on a line by itself to terminate the list. Name the new set FIRSTLAST. You will then be returned to the main menu.



Screen 5.15

Congratulations! You have completed Lesson 5 where you have learned several important probing operations, such as:

* using VALUES to list the unique values of a field in a set or data base

* using Boolean expressions and SELECT to create a set of records

* using Boolean expressions and COMBINE to create a set of records from previously defined sets

* creating sets using DEFINE by specifying item numbers of the records to be included in the set

Before going on to Lesson 6, use the following exercises to become more familiar with these menu items. Using the WETLAND data base:

1. How many unique values are listed in the LOCATION field?

2. What happens if you mistakenly say LOCATION is not a KEYS type field? What happens if you specify the delimiter incorrectly?

3. Form a set of those records whose YEAR is between 1960 and 1970. Verify that you have selected the correct records by using the VALUES menu item.

4. Form a set of those records whose HYDROUNIT is GENERAL.

5. Combine sets formed in 3 and 4 above into one set whose records have a year between 1960 and 1970 and have a GENERAL HYDROUNIT.

6. Create a set whose records have item numbers 1, 5, and 10.

LESSON 6 - MANAGING YOUR INFORMATION

In Lesson 6 you will learn several ways to manage your information. This lesson illustrates how to list the item numbers of the records in a set, how to order (sort) records in a set, and how to make a copy of your data base. Lesson 6 also demonstrates how to create a data base that is a subset of another data base, how to merge two data bases into one, how to delete a set, and how to delete a data base. In addition, the BRIEF menu item is discussed.

The LIST (#28) menu item is used to obtain the item numbers of the records in a set. Using the SPECIES data base, obtain a list of item numbers in the set named ENKYORTN. Note, the item numbers are listed in the same order as the records occur in the set. At this point, this matches the order that the records occur in the data base. When the next menu item, ORDER, is discussed, you will find that the set order can be changed. Press <RETURN> to get back to the main menu.

```
                              QUICKTEXT MENU
                  ================================================
 TASK            |  DATA BASE   |    SETS      | RECORDS   |  PROGRAM
--------------------------------------------------------------------------
DATA ENTRY       | 1. Create      5. Modify     10. Store
and              | 2. Rebuild     6. Define     11. Update
CLEAN UP         | 3. Destroy     7. Forget     12. Delete
                 | 4. Merge
--------------------------------------------------------------------------
                 |              16. Select
PROBE            |              17. Combine                 20. FuzzyValue
                 |
--------------------------------------------------------------------------
                 |21. Directory  25. Setnames  29. Print     35. Help
REPORT           |22. Status     26. Values    32. Browse
                 |23. Fieldnames 27. Report
                 |               28. List
--------------------------------------------------------------------------
                 |37. Open       40. Export                  43. Brief
CONTROL          |38. Backup     41. Subdivide               44. Bye
                 |               42. Order                   45. Misc
                 |
--------------------------------------------------------------------------
Enter main menu selection? 28 <RETURN>
Enter set whose item numbers are to be listed? ENKYORTN    <RETURN>


   1   2   4   5   7   8   10   13

 8 Items in set ENKYORTN

                                Press <RETURN> to continue <RETURN>
```

Screen 6.1

Using the ORDER (#42) menu item you can sort the records in a set according to desired control fields. It is not logical to order keys fields because they may contain more than one value. Using the set ENKYORTN once again, order the records first alphabetically by GROUP (ascending order) and then alphabetically by COMMON NAME (ascending order).

This process is shown in Screen 6.2, remember that the primary sort by GROUP must be keyed before the secondary sort by COMMON NAME. Notice that to terminate selection of control fields you respond to a prompt by pressing <RETURN>.

```
                                   QUICKTEXT MENU
                   ==============================================
  TASK            | DATA BASE    |     SETS      | RECORDS     |   PROGRAM
--------------------------------------------------------------------------------
DATA ENTRY        | 1. Create        5. Modify     10. Store
and               | 2. Rebuild       6. Define     11. Update
CLEAN UP          | 3. Destroy       7. Forget     12. Delete
                  | 4. Merge
--------------------------------------------------------------------------------
                  |                 16. Select
PROBE             |                 17. Combine                 20. FuzzyValue
                  |
--------------------------------------------------------------------------------
                  |21. Directory    25. Setnames   29. Print    35. Help
REPORT            |22. Status       26. Values     32. Browse
                  |23. Fieldnames   27. Report
                  |                 28. List
--------------------------------------------------------------------------------
                  |37. Open         40. Export                  43. Brief
CONTROL           |38. Backup       41. Subdivide               44. Bye
                  |                 42. Order                   45. Misc
                  |
--------------------------------------------------------------------------------
Enter main menu selection? 42 <RETURN>

Enter the name of the set to be sorted,
  or enter <RETURN> to sort the full data base? ENKYORTN    <RETURN>


You must now select, from the following list, the fixed length fields
which are to serve as keys to control the resulting order of records
in the sorted set.  The selection of control fields is terminated
by responding to a prompt with a <RETURN>.
  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE

Enter the desired number of control field number  1? 4 <RETURN>
Is the field to be sorted in ascending (A) or descending (D) order? A <RETURN>

Enter the desired number of control field number  2? 3 <RETURN>
Is the field to be sorted in ascending (A) or descending (D) order? A <RETURN>

Enter the desired number of control field number  3? <RETURN>
Method 1 selected.
```

Screen 6.2

To see the results of ordering the set ENKYORTN use the LIST menu item again. As you can see in Screen 6.3, using ORDER changed the order in which the records exist in the set, which caused the item numbers to be listed in a different order. This can be seen by comparing Screen 6.3 with Screen 6.1. Press <RETURN> to continue.

```
                                 QUICKTEXT MENU
                 ==============================================
 TASK           | DATA BASE     |    SETS      | RECORDS     |   PROGRAM
--------------------------------------------------------------------------
DATA ENTRY      | 1. Create       5. Modify     10. Store
and             | 2. Rebuild      6. Define     11. Update
CLEAN UP        | 3. Destroy      7. Forget     12. Delete
                | 4. Merge
--------------------------------------------------------------------------
                |               16. Select
PROBE           |               17. Combine                  20. FuzzyValue
                |
--------------------------------------------------------------------------
                |21. Directory  25. Setnames  29. Print      35. Help
REPORT          |22. Status     26. Values    32. Browse
                |23. Fieldnames 27. Report
                |               28. List
--------------------------------------------------------------------------
                |37. Open       40. Export                   43. Brief
CONTROL         |38. Backup     41. Subdivide                44. Bye
                |               42. Order                    45. Misc
                |
--------------------------------------------------------------------------
Enter main menu selection? 28 <RETURN>
Enter set whose item numbers are to be listed? ENKYORTN    <RETURN>


   7   8   10   13   1   2   4   5

 8 Items in set ENKYORTN

                                  Press <RETURN> to continue <RETURN>
```

Screen 6.3

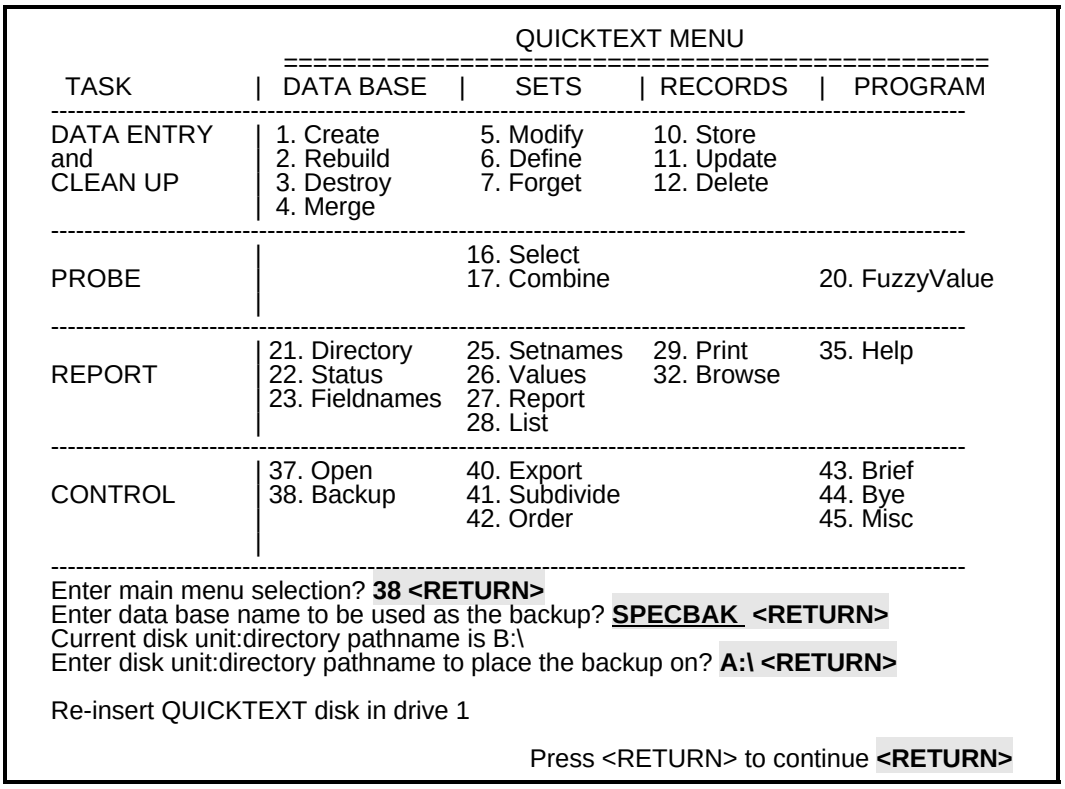
Before making many changes to a data base, it is often desirable to make a copy of the data base in its original form. This can be done using the BACKUP (#38) menu item. Having a BACKUP is also useful in protecting your data from potential hardware, software, or user errors.

If you have made changes in variable length fields or have manipulated sets, you should consider performing a variable file clean up before using BACKUP in order to save disk space. Variable file clean up is Option 7 in the REBUILD (#2) menu item. The following screens show the process of doing a variable file clean up, and subsequently making a backup copy of the cleaned up SPECIES data base. Perform a variable file clean up by selecting REBUILD and Option 7.

When the clean up is finished, the total space recovered will be displayed on the screen, and a beep notifies you the process is finished. In QUICKTEXT, processes which may take awhile, ring a bell when they are completed so you need not stare at the screen while waiting for a process to finish. The bell is also used to get your attention when warnings or error messages are displayed. <RETURN> back to the main menu.

Screen 6.4

Once you have performed a variable file clean up, you can make a backup copy of the SPECIES data base by choosing the BACKUP (#38) menu item. When you are asked to name the backup, name it SPECBAK. You are then asked to enter the disk unit:directory pathname to place the backup on. Remove the program disk from Drive A and place a formatted disk with sufficient space into Drive A. Then answer A:\. When the backup is completed, you are asked to re-insert the QUICKTEXT disk in Drive 1. Remove the disk containing the backup and place the QUICKTEXT program disk back in Drive A. Press <RETURN> and you go back to the main menu.



Screen 6.5

The SUBDIVIDE (#41) menu item is used to create a new data base that is a subset of another data base by copying the subset of records but not removing them from the original data base. The records to be copied to the new data base are selected by naming one or more sets. Using the SPECIES data base, create a new data base named BIRDS containing only the records pertaining to birds. A set called BIRD, containing only records that pertain to birds, already exists. Screen 6.6 shows the process. Notice that when asked where to place the new data base, you may enter just <RETURN> because the previous line indicates the default directory is B:\, the desired location for the new data base. When asked to name a set to be copied to the new data base enter BIRD. To terminate the process of copying sets to the new data base, press <RETURN>. You will then be returned to the main menu. After using SUBDIVIDE, open the newly created BIRDS data base and perform a variable file clean up. This clean up is highly recommended for recovering disk space whenever using SUBDIVIDE to create a new data base. Now reopen the SPECIES data base and use SUBDIVIDE to create another new data base called MAMMALS containing the records in SPECIES that pertain to mammals by using the already existing set called MAMMAL. Open the MAMMALS data base and do a variable file clean up.

SUBDIVIDE can be used as an alternative to deleting records with the menu item DELETE (which was discussed in Lesson 4). By marking the unwanted records as "BAD", making a set that excludes these records, and using SUBDIVIDE, you can eliminate the

unwanted records without deleting all sets. Refer to the discussion of SUBDIVIDE in the QUICKTEXT User's Manual for additional instructions.

```
                              QUICKTEXT MENU
              ==============================================
 TASK        | DATA BASE  |    SETS     | RECORDS   |   PROGRAM
--------------------------------------------------------------------
DATA ENTRY   | 1. Create     5. Modify    10. Store
and          | 2. Rebuild    6. Define    11. Update
CLEAN UP     | 3. Destroy    7. Forget    12. Delete
             | 4. Merge
--------------------------------------------------------------------
             |              16. Select
PROBE        |              17. Combine                20. FuzzyValue
             |
--------------------------------------------------------------------
             |21. Directory 25. Setnames  29. Print    35. Help
REPORT       |22. Status    26. Values    32. Browse
             |23. Fieldnames 27. Report
             |              28. List
--------------------------------------------------------------------
             |37. Open      40. Export                 43. Brief
CONTROL      |38. Backup    41. Subdivide              44. Bye
             |              42. Order                  45. Misc
             |
--------------------------------------------------------------------
Enter main menu selection? 41 <RETURN>
Enter a name for the new subdivided data base? BIRDS_ <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname to place the new data base on? <RETURN>
Enter set to be copied to new data base, or <RETURN> to terminate? BIRD_   <RETURN>
Enter set to be copied to new data base, or <RETURN> to terminate? _____ <RETURN>
 5 records stored in the new data base.
```

Screen 6.6

The MERGE (#4) menu item allows you to merge the records of one data base onto the end of the currently open data base. Both data bases must be identical with respect to the number of fields, width and type of each field, the length of each field name, and the variable file expansion definition (See the QUICKTEXT User's Manual, REBUILD, Option 8 Variable File Expansion). Other than upper/lower letter case differences, if field titles are different, the user is warned, but may choose to continue the merging process. If the two data bases differ, REBUILD can be used first to make them match. Each set from the specified data base is copied to the currently open data base, unless its name is the same as one in the currently open data base. In that case, you are warned that the set is being skipped rather than copied. Note that the sets are not merged together automatically. Rather, for those sets which were skipped, the existing sets are no longer "valid" because they may not contain all records which match the selection criteria which formed them in the first place. Therefore, sets which are identified as being skipped should be deleted using the FORGET (#7) menu item, which will be discussed next, and re-created to contain all appropriate records including the newly merged ones.

Use MERGE to merge the BIRDS data base onto the end of the MAMMALS data base (see Screen 6.7). MAMMALS will be the currently open data base if you did a variable file clean up on MAMMALS as suggested. Choose the MERGE menu item. When asked to

name the data base that is to be merged onto the end of this data base, answer BIRDS. You are notified when the process is complete and <RETURN> moves to the main menu.

```
                                 QUICKTEXT MENU
                    =============================================
 TASK          | DATA BASE    |    SETS      | RECORDS     |   PROGRAM
------------------------------------------------------------------------
DATA ENTRY     | 1. Create      5. Modify     10. Store
and            | 2. Rebuild     6. Define     11. Update
CLEAN UP       | 3. Destroy     7. Forget     12. Delete
               | 4. Merge
------------------------------------------------------------------------
               |               16. Select
PROBE          |               17. Combine                 20. FuzzyValue
               |
------------------------------------------------------------------------
               | 21. Directory  25. Setnames  29. Print     35. Help
REPORT         | 22. Status     26. Values    32. Browse
               | 23. Fieldnames 27. Report
               |                28. List
------------------------------------------------------------------------
               | 37. Open       40. Export                  43. Brief
CONTROL        | 38. Backup     41. Subdivide               44. Bye
               |                42. Order                   45. Misc
               |
------------------------------------------------------------------------
Enter main menu selection? 4 <RETURN>
Enter name of the data base to be merged to the current one? BIRDS   <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname of the data base? <RETURN>
KY         is a duplicate set name and will be skipped.
KYENDANG   is a duplicate set name and will be skipped.
ENKYORTN   is a duplicate set name and will be skipped.
 3 sets were not copied due to name conflicts.
MERGE completed.

                                 Press <RETURN> to continue <RETURN>
```

Screen 6.7

Notice that three sets in the BIRDS data base were not copied to the MAMMALS data base because of duplicate set names. Using the FORGET (#7) menu item, these sets can be deleted, then re-created so that they contain records from the old BIRDS data base in addition to records from the MAMMALS data base.

The three sets that were skipped in the MERGE process are KY, KYENDANG, and ENKYORTN. Screen 6.8 shows the use of FORGET to delete these sets. Note that UNDO or BACK could be used to revive sets if specified prior to returning to the main menu. To terminate the process of forgetting, enter <RETURN> and you will be taken back to the main menu. Then you could re-create these sets so that they contain all appropriate records.

```
                               QUICKTEXT MENU
                    ==============================================
 TASK              |  DATA BASE   |     SETS      | RECORDS   |   PROGRAM
--------------------------------------------------------------------------------
DATA ENTRY         | 1. Create        5. Modify     10. Store
and                | 2. Rebuild       6. Define     11. Update
CLEAN UP           | 3. Destroy       7. Forget     12. Delete
                   | 4. Merge
--------------------------------------------------------------------------------
                   |                 16. Select
PROBE              |                 17. Combine                 20. FuzzyValue
                   |
--------------------------------------------------------------------------------
                   | 21. Directory   25. Setnames  29. Print     35. Help
REPORT             | 22. Status      26. Values    32. Browse
                   | 23. Fieldnames  27. Report
                   |                 28. List
--------------------------------------------------------------------------------
                   | 37. Open        40. Export                  43. Brief
CONTROL            | 38. Backup      41. Subdivide               44. Bye
                   |                 42. Order                   45. Misc
                   |
--------------------------------------------------------------------------------
Enter main menu selection? 7 <RETURN>

A set may be forgotten by entering its name.  Use wild card characters * or ?
to forget multiple sets at once.  For example, * will forget all sets while
A* forgets those beginning with the letter A.  Enter <RETURN> when finished
to return to the main menu.  UNDO or BACK will revive forgotten sets before
returning to the main menu.

Enter set(s) to be forgotten? KY <RETURN>
                 1 sets forgotten
Enter set(s) to be forgotten? KYENDANG <RETURN>
                 1 sets forgotten
Enter set(s) to be forgotten? ENKYORTN <RETURN>
                 1 sets forgotten
Enter set(s) to be forgotten? <RETURN>
```

Screen 6.8

Unwanted data bases can be deleted by using the DESTROY (#3) menu item. DESTROY deletes the currently open data base. It immediately destroys data bases that contain fewer than 5 records. Otherwise, you are asked to confirm the request.

Suppose you want to delete the BIRDS data base because the records contained in this data base are now in the MAMMALS data base as a result of merging. First, you must open the BIRDS data base. Then choose the DESTROY menu item. Since this data base has 5 records, you are asked to confirm the fact that you want to destroy it. Answer YES to confirm the action. A warning reminds you that no data base is now open; then you are returned to the main menu.

```
                              QUICKTEXT MENU
                  ============================================
 TASK           | DATA BASE   |     SETS     | RECORDS  |   PROGRAM
----------------------------------------------------------------------
DATA ENTRY      | 1. Create     5. Modify     10. Store
and             | 2. Rebuild    6. Define     11. Update
CLEAN UP        | 3. Destroy    7. Forget     12. Delete
                | 4. Merge
----------------------------------------------------------------------
                |             16. Select
PROBE           |             17. Combine               20. FuzzyValue
                |
----------------------------------------------------------------------
                |21. Directory 25. Setnames  29. Print   35. Help
REPORT          |22. Status    26. Values    32. Browse
                |23. Fieldnames 27. Report
                |             28. List
----------------------------------------------------------------------
                |37. Open     40. Export                43. Brief
CONTROL         |38. Backup   41. Subdivide             44. Bye
                |             42. Order                 45. Misc
                |
----------------------------------------------------------------------
Enter main menu selection? 3 <RETURN>
BIRDS is a data base with  5 glorious records.
Are you sure you want to permanently delete it? Y <RETURN>
BIRDS is gone forever!
Warning!  No data base is open.
```

Screen 6.9

The BRIEF (#43) menu item reduces the main menu to a single line prompt. This is useful when you wish to keep a visible record of your progress on the screen, rather than having the screen erase each time the main menu prompt is given. When this menu item is selected a second time, or when another data base is opened, the original menu is restored.

```
                              QUICKTEXT MENU
                  ============================================
 TASK           | DATA BASE   |     SETS     | RECORDS  |   PROGRAM
----------------------------------------------------------------------
DATA ENTRY      | 1. Create     5. Modify     10. Store
and             | 2. Rebuild    6. Define     11. Update
CLEAN UP        | 3. Destroy    7. Forget     12. Delete
                | 4. Merge
----------------------------------------------------------------------
                |             16. Select
PROBE           |             17. Combine               20. FuzzyValue
                |
----------------------------------------------------------------------
                |21. Directory 25. Setnames  29. Print   35. Help
REPORT          |22. Status    26. Values    32. Browse
                |23. Fieldnames 27. Report
                |             28. List
----------------------------------------------------------------------
                |37. Open     40. Export                43. Brief
CONTROL         |38. Backup   41. Subdivide             44. Bye
                |             42. Order                 45. Misc
----------------------------------------------------------------------
Enter main menu selection? 43 <RETURN>
Enter main menu selection?
```

Screen 6.10

Congratulations! You have completed Lesson 6 of the QUICKTEXT Self-Taught Training Package, where you have learned several information management techniques, such as:

* using LIST to list the item numbers of records in a set

* using ORDER to sort the records in a set according to control fields

* using BACKUP to make a backup copy of your data base

* using SUBDIVIDE to make a data base which is a subset of another and as a way of deleting records without forgetting all of the sets

* using MERGE to bring two identically structured data bases together

* how to delete a set using FORGET

* how to delete a data base using DESTROY

* how to reduce the main menu to a single line prompt using BRIEF

To gain more experience with these techniques, try the following exercises using the WETLAND data base:

1. Obtain the item numbers of the records in the set WET.

2. Arrange the records in the set WET so that the most recent record (based on the year field) appears first, then confirm this change.

3. Perform a variable file clean up on the WETLAND data base. Then create a backup copy of this data base named WETLBAK.

4. Using the WETLAND data base, create a new data base named WET1 that contains only the records in the set WET. Perform a variable file clean up on the WET1 data base.

5. Merge the records of the WET1 data base onto the end of the WETLBAK data base. Delete any sets that are skipped.

6. Clean up your data disk by deleting all data bases that were created during this lesson and exercise. Be sure to keep the original SPECIES and WETLAND data bases intact for use in later lessons. (Hint: before choosing the DESTROY menu item, be sure to OPEN the data base that you want to destroy!)

LESSON 7 - POWERFUL TECHNIQUES

In Lesson 7 you will learn several of QUICKTEXT's powerful techniques, including how to create a data base from an ASCII text file; how to export a data base into an ASCII text file whose structure is the same as an EXPORT file from MANAGE, a mainframe data base management system; how to modify information in a data base using the internal editor; and how to prepare a file for modification by an external editor.

The CREATE (#1) menu item provides two methods of creating a data base. The first method, creation interactively through the keyboard, was discussed in Lesson 3. The second method creates a data base from an ASCII text file. The file consists of two parts. Part A, the FORMAT portion of the file, is a table similar to the output from the MANAGE Format command. Part B, the data portion of the file, contains the records that will be stored. Field values may be in either a MANAGE Export/Import format or REPORT in <MANAGE STYLE> free format. Refer to the QUICKTEXT User's Manual (the listings for the records MANAGE Format Command Output, MANAGE Export/Import Format, and REPORT's Special Features, and the BATCH LOADING section) for specifics on these file formats.

During QUICKTEXT installation, two sample, creation files were copied to your QUICKTEXT data base disk. The first one, FORMEX.MAN, is in MANAGE Export/Import format and the second one, FORMRPT.MAN, is in REPORT in <MANAGE STYLE> free format. When creating from an ASCII text file, it is helpful to copy the FORMEX.MAN or FORMRPT.MAN file and edit the copy as appropriate.

First let's discuss creating a data base from an ASCII text file in MANAGE Export/Import format. Assume you made a copy of the FORMEX.MAN file and are editing the copy. Rather than discuss all aspects of the FORMEX.MAN file, look at the portions you would edit. A hard copy of this file is shown in Figure 7.1.

First look at Part A, the FORMAT portion of the file. Part A ends with the line "GOODBYE!". The number of records to be stored in the data base is indicated on the first line in columns 25-31; in this case it is 2. The second line specifies the name of the data base to be created in columns 20-27; in this case, AWP. The field definition lines must be at least 66 characters long and end in a carriage return and line feed. In FORMEX.MAN the carriage return and line feeds are in column 77 which is fine. The AWP data base will contain nine fields (the eight shown plus the ITEM# Field which will automatically be supplied by QUICKTEXT), all of various types and widths. The field's name is taken from columns 7-20, its type from column 21, and its width or length from columns 33-38. Abbreviations for the different data types are: I (integer) or D (decimal) for numeric fields; C (character) for alphanumeric fields; and V (variable length) for variable length fields. This file was generated by MANAGE, a mainframe data base management system. The other

field definition information (columns) was generated by MANAGE but is not used by QUICKTEXT.

```
 CURRENT NO. OF RECORDS:     2
       DATASET: AWP

        *FIELD FORMAT DESCRIPTIONS*
     NAME           TYPE START LENGTH DP PSTAT SSTAT     MV  CH   KM KJ HK

  1. DATE           CHAR     1      8  0 PUBLIC  NONE      0          0     2
  2. ISSUE          CHAR    10      8  0 PUBLIC  DUPE     50          0     0
  3. PROBLEM        CHAR    19      8  0 PUBLIC  DUPE    300          0     0
  4. TASK           CHAR    28      8  0 PUBLIC  DUPE    500          0     1
  5. BUDGET         DEC     37      6  1 OWNER   NONE      0          0     0
  6. SOURCE         CHAR    44     40  0 OWNER   DUPE     50          0     0
  7. DESCRIPTION    VAR      0   1400  0 PUBLIC  NONE      0          0     0
  8. KEYWORDS       VAR      0    140  0 PUBLIC  KEYS   2000   /     25     0
 GOODBYE!
82/02/20
ENERGY
HABITAT
NAES
12.3
HR-R7
   The Savannah Coal Co. is siting a mine in a prime moose wintering
area. In addition, the holding ponds are projected to overflow once
in five years. A major spawning area for chinook salmon occurs 1.5 mi
downstream on the Altrus River. The population is expected to decline
by 50% within 20 years. Negotiations with the permitee and issuing
agency are critical to incorporate additions mitigation measures and
minimize losses.
$
SALMON/MOOSE/COAL/SPAWN/MITIGATE/
$$
83/06/02
AGRICULT
HABITAT
SEES
18.1
FS
   The Forest Service is evaluating the effects of harvesting old
growth forests.  SEES has proposed a study to look at the impact to
Bald Eagle population.  Old growth forests contain approx. 90% of all
Eagle nests in Alaska.  It is anticipated that artifical structures
are unsuitable to mitigate for harvesting. This study will also
examine feeding habits during the nesting season.
$
BALD EAGLE/NEST/FORESTRY/MITIGATE/
$$
```

Figure 7.1 FORMEX.MAN File

Information in Part B, the data portion of this file, is the actual data to be stored. Field values are in MANAGE Export/Import format. Of course this data could be entered using an editor, but there are at least two existing automated ways to generate data in this format. One, the MANAGE command EXPORT can be used. Note that MANAGE's EXPORT always exports the entire data base. Two, the QUICKTEXT EXPORT (#40) menu item, Option 1, MANAGE Import File, which will be discussed later in this lesson, can be used. QUICKTEXT can export the entire data base or portions of it using sets.

In FORMEX.MAN, the first line of Part B is the line "82/02/20". All lines from this line to the end of the file would be deleted and replaced with the appropriate data values for the data base you would be creating. Once again, the MANAGE Export/Import format is explained fully in the QUICKTEXT User's Manual. Briefly, in this format, there is one numeric or alphanumeric field per line for fixed length fields; variable length fields take as many lines as needed and end in a single dollar sign ($), or if it is the last field in a record, a double dollar sign ($$). The last line of each record must contain a double dollar sign ($$) even if there are no variable length fields.

Create a data base from the file FORMEX.MAN, as shown in Screen 7.1. First select the CREATE (#1) menu item. When asked to enter the creation mode desired, answer 2. The disk file is named FORMEX.MAN and is on the disk in Drive B. Enter just <RETURN> to tell QUICKTEXT FORMEX.MAN is on B:\ since the previous line indicates the default disk unit:directory pathname is already set to B:\. When asked to enter the disk unit:directory pathname to place AWP on, again press just <RETURN>, for the same reason as just mentioned, to place it on B:\. Enter yes to open the newly created AWP data base. The message which prints indicates 2 records were stored and the data base contains 9 fields.

During creation, if QUICKTEXT detects problems in the ASCII text file being read, warning and error messages are printed. However, it is a good idea to always double check by opening the new data base, checking the number of records, checking the number of fields, doing a FIELDNAMES to check the field titles, and spot checking a few records with BROWSE. The reason for this is sometimes the ASCII text file contains errors which QUICKTEXT does not detect. For example, if the field titles were one column to the left of where they should be, CREATE itself would not detect an error. However, when you opened the new data base and did a FIELDNAMES, you would see that the first letter of each fieldname was missing. In the AWP data base, use FIELDNAMES to check the fieldnames. Then use BROWSE to check Record 2 to verify that everythings looks acceptable.

```
Enter main menu selection? 1 <RETURN>

A data base may be created:

    1) Interactively from the keyboard.
    2) By loading an ASCII text file that mimics output from the MANAGE
       commands FORMAT and EXPORT, or REPORT in <MANAGE STYLE> free format.

Enter creation mode desired? 2 <RETURN>
Enter the file name (with optional extension)? FORMEX.MAN <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname where the file is located? <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname to place AWP on? <RETURN>
Do you want to open this data base? Y <RETURN>
Data base is B:\AWP
It contains  2 records, and  9 fields.

                                  Press <RETURN> to continue <RETURN>
```

Screen 7.1

Now let's discuss creating a data base from an ASCII text file in REPORT in <MANAGE STYLE> free format. This is useful when converting a portion of a MANAGE data base to a QUICKTEXT data base because a REPORT formatted file can contain the data for a set of records whereas if the MANAGE command EXPORT is actually used to create a file, the entire data set is exported. Assume you made a copy of the FORMRPT.MAN file. A hard copy of this file is shown in Figure 7.2. Part A, the FORMAT portion of a MANAGE Export/Import format file, is slightly different from Part A of a REPORT in <MANAGE STYLE> free format file. Those differences are discussed in the QUICKTEXT User's Manual. The items you are concerned with are exactly the same as described earlier in this lesson. Note that FORMRPT.MAN does not contain extra information on the field definition lines because it was generated using an editor rather than by MANAGE.

Again, the information in Part B, the data portion of the file, is the actual data to be stored. In this case, the field values are in REPORT in <MANAGE STYLE> free format. The data could be entered using an editor, but there are at least two existing automated ways to to generate data in this format. One, the MANAGE command REPORT can be used. Two, the QUICKTEXT REPORT (#27) menu item, special REPORT feature Free format <MANAGE STYLE>, which will be discussed in Lesson 8, can be used.

In FORMRPT.MAN, the first line of Part B is the line:

<DATE> 82/02/20 <ISSUE> ENERGY <PROBLEM> HABITAT <TASK> NAES

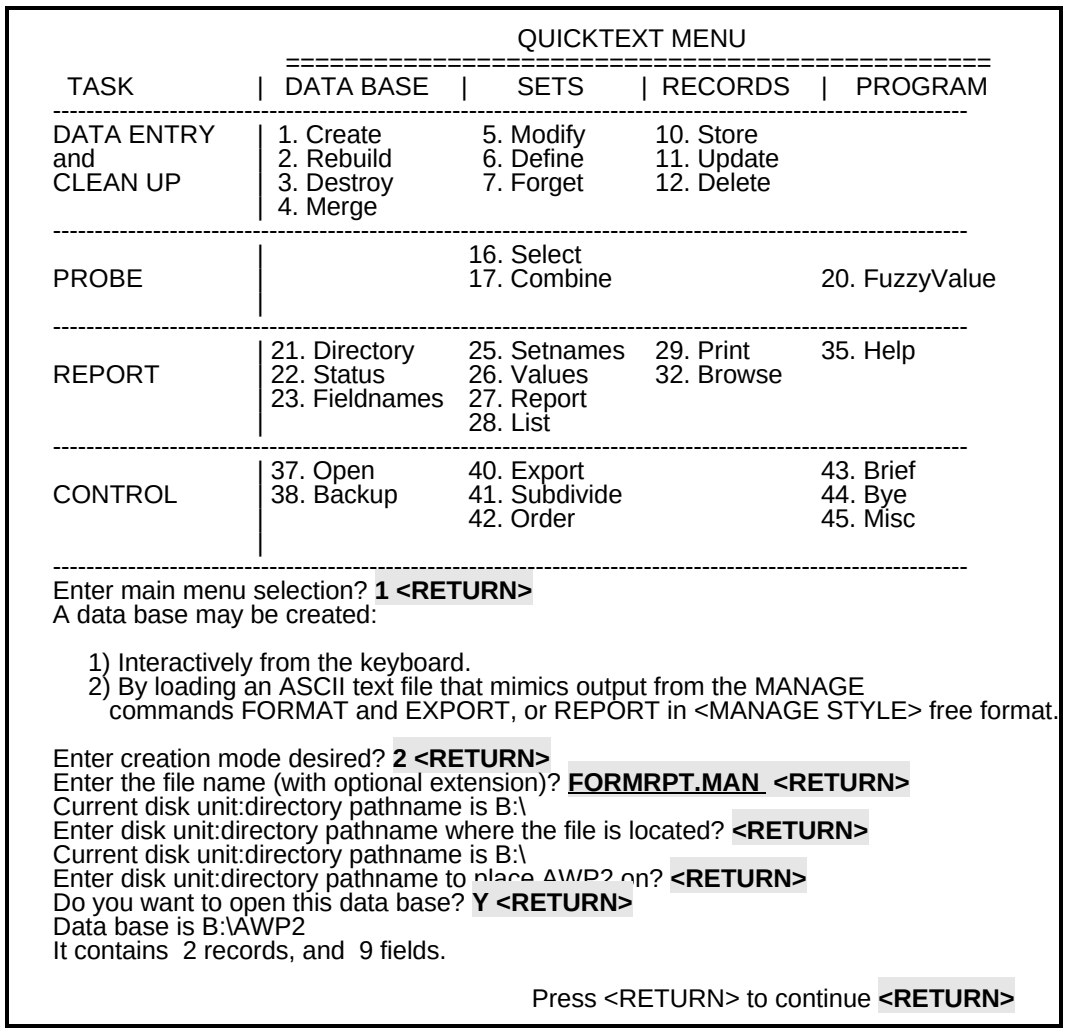
All lines from this line to the end of the file would be deleted and replaced with the appropriate data values for the data base you would be creating. Note, the blank line above this line is essential as described in the QUICKTEXT User's Manual and should not be deleted.

Briefly, in this format, there is a blank line between each record. Field names, surrounded by angular brackets (<fieldname>) and followed by a blank space are repeated for each record. Additionally, the last line of the file must contain some non-blank characters in columns 2 and/or 3.

```
CURRENT NO. OF RECORDS:     2
       DATASET: AWP2



  1. DATE                  C          8                                    .
  2. ISSUE                 C          8                                    .
  3. PROBLEM               C          8                                    .
  4. TASK                  C          8                                    .
  5. BUDGET                D          6                                    .
  6. SOURCE                C         40                                    .
  7. DESCRIPTION           V                                               .
  8. KEYWORDS              V                                               .
GOODBYE!
   SETNAME: A

<DATE> 82/02/20   <ISSUE> ENERGY   <PROBLEM> HABITAT   <TASK> NAES
<BUDGET> 12.3   <SOURCE> HR-R7
<DESCRIPTION>
     The Savannah Coal Co. is siting a mine in a prime moose wintering
   area. In addition, the holding ponds are projected to overflow once
   in five years. A major spawning area for chinook salmon occurs 1.5 mi
   downstream on the Altrus River. The population is expected to decline
   by 50% within 20 years. Negotiations with the permitee and issuing
   agency are critical to incorporate additions mitigation measures and
   minimize losses.
<KEYWORDS>
   SALMON/MOOSE/COAL/SPAWN/MITIGATE/

<DATE> 83/06/02   <ISSUE> AGRICULT   <PROBLEM> HABITAT
<TASK> SEES   <BUDGET> 18.1   <SOURCE> FS
<DESCRIPTION>
     The Forest Service is evaluating the effects of harvesting old
   growth forests.  SEES has proposed a study to look at the impact to
   Bald Eagle population.  Old growth forests contain approx. 90% of all
   Eagle nests in Alaska.  It is anticipated that artifical structures
   are unsuitable to mitigate for harvesting. This study will also
   examine feeding habits during the nesting season.
<KEYWORDS>
   BALD EAGLE/NEST/FORESTRY/MITIGATE/
THIS IS THE END OF THE FILE
```

Figure 7.2 FORMRPT.MAN File

Create a data base from the file FORMRPT.MAN as shown in Screen 7.2. First select the CREATE (#1) menu item. When asked to enter the creation mode desired, answer 2. The disk file is named FORMEX.RPT and is on the disk in Drive B. Enter just <RETURN> to tell QUICKTEXT FORMRPT.MAN is on B:\ since the previous line indicates the default disk unit:directory pathname is already set to B:\. When asked to enter the disk unit:directory pathname to place AWP2 on, again press just <RETURN>, for the same reason as just mentioned, to place it on B:\. Enter yes to open the newly created AWP2 data base. The message which prints indicates 2 records were stored and the data base contains 9 fields. As mentioned earlier, it is a good idea to spot check the newly created data base before proceeding.



Screen 7.2

This lesson has discussed two ways of importing data to create a data base. Now let's discuss one way to export data.

The EXPORT (#40) menu item, Option 1, allows a data base to be transferred to an ASCII text file in a format suitable for loading into MANAGE or other application programs, including QUICKTEXT itself. A set of records or the entire data base can be exported as well as any or all fields. As mentioned earlier in this lesson, the output from EXPORT, Option 1, can be used as the data portion (Part B) of a MANAGE Export/Import formatted file, from which a QUICKTEXT data base can be created. The FORMAT portion, Part A, would need to be created and added to the front of the ASCII text file. On rare occasions, this ability has been used to recover data from a damaged data base.

Suppose you want to export the DATE, ISSUE, and PROBLEM fields of the records in the AWP data base. First open the AWP data base. Select EXPORT, Option 1, and

press <RETURN> to select the entire data base. Enter field numbers 2, 3, and 4 separated by commas. Name the file AWPUP and place it on Drive B. You will then be returned to the main menu.

```
Enter main menu selection? 40 <RETURN>

Export Format Options:

    1. MANAGE Import File (default)
    2. ASCII Comma Delimited Fields
    3. ASCII Fixed Length Fields
    4. A Variable Length Field as separate Record Value Files
    5. A Variable Length Field as text in a Relational Table
    6. A Multi-valued (KEYS) Field as values in a Relational Table

Enter selection? 1 <RETURN>
Enter the name of the set to be exported, or
<RETURN> to list the full data base? _____ <RETURN>

  1. ITEM#
  2. DATE
  3. ISSUE
  4. PROBLEM
  5. TASK
  6. BUDGET
  7. SOURCE
  8. DESCRIPTION
  9. KEYWORDS
Enter fields to be exported as numbers, or ranges (i.e. 2-5), separated
by commas, or ALL for all fields.
? 2,3,4 <RETURN>
Enter file name (with optional extension) to be used
for the MANAGE Import data? AWPUP___<RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname to place the export data on? <RETURN>
```

Screen 7.3

Now let's discuss editing information in a data base using an editor. The MODIFY (#5) menu item has four modes. The first two modes, Manual and Automatic, were discussed in Lesson 4. The last two editing modes, Internal Editor and External Editor, will be discussed here.

MODIFY provides an Internal Editor mode which allows the user to correct information using special editing commands. The current value for each record is made available for editing. The user may choose a display field value to be listed with each record. Typically the ITEM# Field is used, although any fixed length field may be used. Do not edit the display field value.

Suppose you want to edit the date field (fixed length) of the records in the data base AWP so that they read month/day/year (instead of year/month/day). Choose MODIFY. Press <RETURN> to edit all records in the data base. Choose the DATE field, 2, to be edited. Next, select the Internal Editor mode, 3. Choose the ITEM# Field, 1, as the display field. The Edit: prompt will appear. Enter H (help) and <RETURN>.

```
Enter main menu selection? 5 <RETURN>
Enter set to be edited, enter beginning item number to edit consecutive
records, or enter <RETURN> to edit entire data base? _____ <RETURN>

  2. DATE
  3. ISSUE
  4. PROBLEM
  5. TASK
  6. BUDGET
  7. SOURCE
  8. DESCRIPTION
  9. KEYWORDS
Enter number of field to be edited? 2 <RETURN>
Enter editing mode desired:
        1) Manual (Records are edited one at a time)
        2) Automatic (All records are edited the same)
        3) Internal Editor
        4) External Editor
? 3 <RETURN>
Enter number of field to be displayed during editing?
(enter 0 for no field display)? 1 <RETURN>
Edit: H <RETURN>
```

Screen 7.4

Screens 7.5 and 7.6 show the internal editor help information. For more information, see the QUICKTEXT User's Manual. The second <RETURN> takes you back to the Edit: prompt.

```
The following are valid commands to the prompt Edit:

    BACK, DELETE, DOWN, END, HELP, INSERT, LAST, LIST, REPLACE, UP.

First letter abbreviations work except for DOWN (DO) and LAST (LA). Lines are
referenced by line number. Entering a single line number after Edit: displays
the line and allows it to be changed with special editing keys. After editing
a line, use DOWN or UP to edit the next or prior line number. To enter new
text before the second line, use INSERT 2. To show all line numbers and text,
use LIST by itself. LIST 5 shows only the fifth line; LIST 5,9 shows the range
of lines. The Scroll-Lock key ends a listing quickly. DELETE 4 deletes the
forth line; DELETE 3,6 deletes the range of lines. LAST reports the number of
lines and characters. REPLACE "xy","z" changes every xy occurance to z. BACK
exits the editor after abandoning all changes. END exits keeping all changes!

                                Press <RETURN> to continue <RETURN>
```

Screen 7.5

Special editing keys and their action while editing a line are given below:

Cursor	Func	Ctrl	Action
RIGHT	F1	^A	Copy the next line buffer character.
LEFT		^H	Back up and erase one character (same as BACKSPACE).
DELETE		^Z	Delete the next line buffer character.
^RIGHT	F8	^Q	Copy the line buffer to the next word.
^LEFT	F7	^W	Back up and erase the last word.
	F9	^T	Delete the line buffer to the next word.
	F2	^D	Copy line buffer up to next character typed.
		^S	Same as ^D.
	F4	^X	Delete line buffer up to next character typed.
INSERT		^E	Toggles insert mode to preserve line buffer characters.
		^Y	Same as ^E.
END	F3	^G	Copy remaining line buffer characters.
	F6	^F	Reprints the line and remaining line buffer characters.
	F5	^B	Start over and preserve remaining line buffer characters.
		^N	Start over and discard remaining line buffer characters.
HOME		^R	Restore line buffer characters after last ^B, ^F, ^N, ^M.

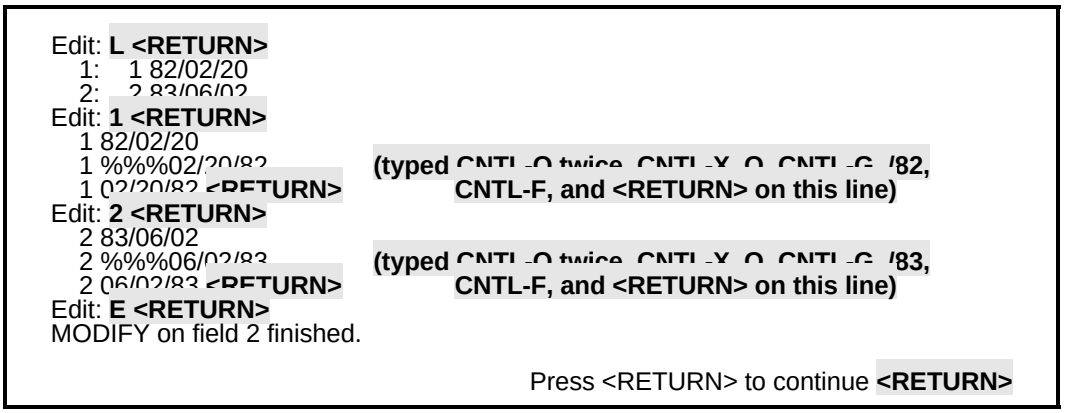
<RETURN> discards any remaining line buffer characters and provides input to the QUICKTEXT Editor.

Press <RETURN> to continue **<RETURN>**

Screen 7.6

To begin editing, list the lines of information in the editor by entering L at the Edit: prompt. Notice that when the field being edited is fixed length, each value, along with its optional display field value, is presented in the editor as a separate line. Do not add or delete lines when editing a fixed length field or when you try to save the changes you will get a message stating that there are too many or too few lines returned from the editor. This can be a serious problem, and is not easily corrected.

At the next Edit: prompt, enter 1 to edit the first line. Do not edit the display field values because these changes would not be made anyway, and doing so may cause problems when you exit from the editor. When using the Control Key, hold it down while pressing an appropriate letter. The notation CNTL-Q is used to indicate pressing the Control Key and holding it down while the Q is pressed. To avoid editing the display field value, press CNTL-Q twice to move the cursor to the point where you want editing to begin. Press CTRL-X, then 0 (zero) to delete all characters up to the 0. The deleted characters will show as %%%. Next, press CTRL-G to reprint the rest of the line (02/20). To insert the year at the end of the line, type /82. To reprint the line, press CTRL-F. If the changes have been made correctly, press <RETURN> to return to the Edit: prompt. Repeat this process for the second line in the editor. To save these changes, enter E (end) and <RETURN> to move back to the main menu. If you did not want the changes made, you could have entered BACK instead of E (end).



Screen 7.7

Variable length fields can also be edited in the internal editor. When a variable length field is sent to the edit buffer, each value is preceded by a delimiter line of asterisks which includes the optional display field value. As mentioned before, do not edit these display values. When editing a variable length field, lines may be added or deleted as desired exclusive of the display lines.

Edit the description field (variable length) of the records in the AWP data base. Choose the MODIFY (#5) menu item, and press <RETURN> to edit the entire data base. Choose the DESCRIPTION field, 8, to be edited. Select the Internal Editor mode, 3, and use the ITEM# Field, 1, as the display field. Using the commands and editing keys listed in the on-line help and/or the QUICKTEXT User's Manual, modify these two records any way you choose until you are familiar with the editing functions. To save the changes and exit from the editor type E at the Edit: prompt. Next you are asked if you want the line endings to be adjusted. Enter N to have the contents of the edit buffer written to the data base without line ending adjustments. <RETURN> takes you to the main menu.

Once you have answered the line adjustment prompt, that answer stays in effect until you open a data base; select the MISC (#45) menu item, Option 8 Set variable length text line ending adjustment; or select the menu item BYE (#44) and exit from QUICKTEXT. If you are interested in using the line ending adjustment option, see the QUICKTEXT User's Manual first to understand how it works and what are its limitations.

```
Enter main menu selection? 5 <RETURN>
Enter set to be edited, enter beginning item number to edit consecutive
records, or enter <RETURN> to edit entire data base? _____ <RETURN>

  2. DATE
  3. ISSUE
  4. PROBLEM
  5. TASK
  6. BUDGET
  7. SOURCE
  8. DESCRIPTION
  9. KEYWORDS
Enter number of field to be edited? 8 <RETURN>
Enter editing mode desired:
        1) Manual (Records are edited one at a time)
        2) Automatic (All records are edited the same)
        3) Internal Editor
        4) External Editor
? 3 <RETURN>
Enter number of field to be displayed during editing?
(enter 0 for no field display)? 1 <RETURN>
Edit: L <RETURN>
    1:  *****    1*****
    2:The Savannah Coal Co. is siting a mine in a prime moose wintering
    3:area. In addition, the holding ponds are projected to overflow once
    4:in five years. A major spawning area for chinook salmon occurs 1.5 mi
    5:downstream on the Altrus River. The population is expected to decline
    6:by 50% within 20 years. Negotiations with the permitee and issuing
    7:agency are critical to incorporate additions mitigation measures and
    8:minimize losses.
    9:  *****    2*****
   10:The Forest Service is evaluating the effects of harvesting old
   11:growth forests.  SEES has proposed a study to look at the impact to
   12:Bald Eagle population.  Old growth forests contain approx. 90% of all
   13:Eagle nests in Alaska.  It is anticipated that artifical structures
   14:are unsuitable to mitigate for harvesting. This study will also
   15:examine feeding habits during the nesting season.
Edit: E <RETURN>
Do you want line endings adjusted on variable text after editing? N <RETURN>
MODIFY on field 8 finished.

                                  Press <RETURN> to continue <RETURN>
```

Screen 7.8

The MODIFY (#5) menu item also provides an External Editor mode which can be used to work with large amounts of information that would not fit in the internal editor, to access an editor which has more editing features than the internal editor, or to load selected information into a data base from an external source. If you specified you wanted QUICKTEXT to access your editor during installation, MODIFY's External Editor mode lists three options as shown in Screen 7.9; otherwise, only the first two options are listed. Option 3 performs a combination of Options 1 and 2 without leaving QUICKTEXT. If you use Option 3 and your editor complains that the file is too large, use Options 1 and 2 individually. This lesson looks at Options 1 and 2 individually. All three options use an external ASCII text file, which serves as an intermediate file between QUICKTEXT and other applications. Once this intermediate file is written, it can be modified using an editor or a word processing package (which would require that the file be converted back to an ASCII file to avoid problems with control characters), and then can be read back into the QUICKTEXT data base.

Edit the KEYWORDS field of the records in the AWP data base using an external word processing package or editor. First, select MODIFY and press <RETURN> to edit the entire data base. Enter 9 to edit the KEYWORDS field. Choose the External Editor mode, 4. Enter 1 to write to a text file. Name this file KEYWRD and write it to Drive B. Select the ITEM# Field, 1, as the display field. After a set of instructions is displayed, press <RETURN> to return to the main menu.

```
Enter main menu selection? 5 <RETURN>
Enter set to be edited, enter beginning item number to edit consecutive
records, or enter <RETURN> to edit entire data base? _____ <RETURN>
  2. DATE
  3. ISSUE
  4. PROBLEM
  5. TASK
  6. BUDGET
  7. SOURCE
  8. DESCRIPTION
  9. KEYWORDS
Enter number of field to be edited? 9 <RETURN>
Enter editing mode desired:
        1) Manual (Records are edited one at a time)
        2) Automatic (All records are edited the same)
        3) Internal Editor
        4) External Editor
? 4 <RETURN>
 1) Write a text file for use in an external Editor
 2) Read a text file after using an external Editor
 3) Use your external Editor on this data now
Enter selection? 1 <RETURN>
Enter text file name (with optional extension)? KEYWRD    <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname on which to write text file? <RETURN>
Enter number of field to be displayed during editing?
(enter 0 for no field display)? 1 <RETURN>

Exit QUICKTEXT and use a Text Editor (e.g. EDLIN) to edit the
data in file B:\KEYWRD
Then return to QUICKTEXT, follow the same prompting path
through MODIFY, and choose:
  2) Read a text file after using an external Editor

                                Press <RETURN> to continue <RETURN>
```

Screen 7.9

Now that you have prepared an external file, exit from QUICKTEXT and use a word processing package or other editor to make changes to the field contents. When editing any field, whether it is variable or fixed length, do not edit the contents of the first line of the file or the delimiter lines of asterisks and/or display field values. In this case remember to separate all entries in a record with a / because this is a keywords field. After making the changes, save the file, convert the file to ASCII if necessary, and return to QUICKTEXT.

To read these changes back into the QUICKTEXT data base, first open the AWP data base and choose the MODIFY (#5) menu item. Press <RETURN> to edit the entire data base, and select Field 9 to be edited. Choose the External Editor mode, 4. Enter 2 to read a file, which is named KEYWRD on Drive B. If the file you specify does not match the data

base and field you are modifying, you will be warned. QUICKTEXT tells you when the file was created, and asks if you want line endings adjusted. Answer no and <RETURN> moves you to the main menu.

```
Enter main menu selection? 5 <RETURN>
Enter set to be edited, enter beginning item number to edit consecutive
records, or enter <RETURN> to edit entire data base? _____ <RETURN>

  2. DATE
  3. ISSUE
  4. PROBLEM
  5. TASK
  6. BUDGET
  7. SOURCE
  8. DESCRIPTION
  9. KEYWORDS
Enter number of field to be edited? 9 <RETURN>
Enter editing mode desired:
        1) Manual (Records are edited one at a time)
        2) Automatic (All records are edited the same)
        3) Internal Editor
        4) External Editor
? 4 <RETURN>
 1) Write a text file for use in an external Editor
 2) Read a text file after using an external Editor
 3) Use your external Editor on this data now
Enter selection? 2 <RETURN>
Enter text file name (with optional extension)? KEYWRD   <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname from which to read text file? <RETURN>
This external Editor file was created on  19-MAR-90 15:23
Do you want line endings adjusted on variable text after editing? N <RETURN>
MODIFY on field 9 finished.

                                Press <RETURN> to continue <RETURN>
```

Screen 7.10

Congratulations! You have finished Lesson 7 of the training package, where you have learned several powerful techniques, such as:

* how to CREATE a data base from an ASCII text file in MANAGE Export/Import or REPORT in MANAGE STYLE> free format

* how to EXPORT a data base into a file that is suitable for loading into MANAGE, QUICKTEXT, or other application packages

* how to MODIFY information in a data base using the internal editor

* how to MODIFY information in a data base by preparing a file for use in an external editor, then reading it back into the QUICKTEXT data base

To gain more experience with these QUICKTEXT features, try creating, uploading, and modifying the other sample data bases.

LESSON 8 - FANCY REPORTS

In this lesson you will learn how to report information to a disk file, as well as several special reporting features of QUICKTEXT, such as automatic indentation, sub-totals, record separators, table separators, and Free format <MANAGE STYLE>. This lesson is different than previous lessons in that it is not a "hands on" demonstration of these techniques. This lesson provides a description and sample output of each technique.

In addition to reporting to the screen and printer, QUICKTEXT allows you to report information to a disk file. This is useful for transferring selected records and fields to other application programs, such as word processing. It is also useful for cases when a disk file is preferred over a printout, when using a disk file allows you to access a different printer or printer setup, etc. Screen 8.1 shows the process of reporting information to a disk file. Fields 2, 3, and 4 in the SPECIES data base are being reported to the disk file named SP234.TXT on Drive B. Notice the use of the dash (-) in specifying the fields to be reported. After you return to main menu, exit out of QUICKTEXT by selecting the BYE (#44) menu item; use your editor, listing program, or word processor to view the contents of the file SP234.TXT; and then re-enter QUICKTEXT. A better option than leaving QUICKTEXT with BYE and re-entering would be to select the MISC (#45) menu item, Option 7, Shell to MS-DOS. After examining the file, type "exit" to re-enter QUICKTEXT. A copy of the output is shown in Figure 8.1

```
Enter main menu selection? 27 <RETURN>

Enter the name of the set to be listed, or
<RETURN> to list the full data base? _________ <RETURN>
Where do you want this report listed?    1) Screen
                                         2) Disk
                                         3) Printer
? 2 <RETURN>
Enter the report's file name (with optional extension)? SP234.TXT  <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname to receive this report? <RETURN>
Do you want page headings in the report? Y <RETURN>
Enter number of lines per page? <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 2-4 <RETURN>

Enter a report title to be included in each page heading?
? <RETURN>
Do you want any special REPORT features? N <RETURN>
```

Screen 8.1

Figure 8.1 shows a copy of the disk file SP234.TXT created by REPORT. Since page headings were requested, the field names are used as column headings. In addition, the date, time, and page number are listed on the first line. Since only <RETURN> was entered at the request for a report title and since the whole data base was being reported, the data base name is also listed on the first line. Entering just <RETURN> to the number of lines per page prompt, sets the number to 99,999 and is the way to generate a file without embedded page headings.

Data base is SPECIES 19-MAR-90 9:24:34 Page 1

SCIENTIFIC NAME	COMMON NAME	GROUP
FELIS CONCOLOR COUGAR	EASTERN COUGAR	MAMMAL
FELIS CONCOLOR CORYI	FLORIDA PANTHER	MAMMAL
TRICHECHUS MANATUS	FLORIDA MANATEE	MAMMAL
MYOTIS GRISESCENS	GRAY BAT	MAMMAL
MYOTIS SODALIS	INDIANA BAT	MAMMAL
FALCO PEREGRINUS ANATUM	AMERICAN PERIGRIN FALCON	BIRD
FALCO PEREGRINUS TUNDRIUS	ARTIC PEREGRINE FALCON	BIRD
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	BIRD
PELECANUS OCCIDENTALIS CAROLINENSIS	EASTERN BROWN PELICAN	BIRD
PICOIDES (=DENDROCOPOS) BOREALIS	RED-COCKADED WOODPECKER	BIRD
ACIPENSER BREVIROSTRUM	SHORTNOSE STURGEON	FISH
HYBOPSIS CAHNI	SLENDER CHUB	FISH
PERCINA TANASI	SNAIL DARTER	FISH
HYBOPSIS MONACHA	SPOTFIN CHUB	FISH
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	REPTILE
DRYMARCHON CORAIS COUPERI	EASTERN INDIGO SNAKE	REPTILE
CHELONIA MYDAS	GREEN TURTLE	REPTILE
ERETMOCHELYS IMBRICATA	HAWKSBILL TURTLE	REPTILE
SAGITTARIA FASCICULATA	BUNCHED ARROWHEAD	PLANT
TRILLIUM PERSISTENS	PERSISTENT TRILLIUM	PLANT

Figure 8.1 Sample REPORT output with no special features

QUICKTEXT not only allows you to REPORT information to the screen, printer, and disk, but also provides several special REPORT features. The first special REPORT feature, automatic indentation, is useful to outline related information contained in a data base, e.g. planning objectives, strategies, and tasks. Automatic identation indents each record according to a numeric control field within the record. Values in the control field equal to or less than a specified starting level print records flush with the left margin. Otherwise, the difference between the control field values and the starting value is used to determine the number of tabs to indent the record. The starting level is set to zero if only <RETURN> is entered to the starting identation level prompt.

Several additional changes occur when the automatic indentation option is chosen. Each field title is double underlined, and is reprinted at the top of each page and at indentation level changes. Variable length text is displayed directly below its title. The user has the option of having field titles reprinted for each record rather than just at the top of each page and at indentation level changes. Screen 8.2 shows the process of reporting information from the SPECIES data base to a disk file using the automatic indentation option, with Field 7 as the control field.

```
Enter main menu selection? 27 <RETURN>

Enter the name of the set to be listed, or
<RETURN> to list the full data base? _____ <RETURN>
Where do you want this report listed?                    1) Screen
                                                         2) Disk
                                                         3) Printer
? 2 <RETURN>
Enter the report's file name (with optional extension)? AUTOIND  <RETURN>
Current disk unit:directory pathname is B:\
Enter disk unit:directory pathname to receive this report? <RETURN>
Do you want page headings in the report? <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 3,4,2 <RETURN>
Do you want any special REPORT features? Y <RETURN>
Select one:      1) Automatic indentation
                 2) Sub-totals
                 3) Record separators
                 4) Table separators
                 5) Free format <MANAGE STYLE>
? 1 <RETURN>
Enter the field number which controls indentation? 7 <RETURN>
Enter the starting indentation level (default is 0)? <RETURN>
Do you want field titles reprinted for each record? N <RETURN>
```

Screen 8.2

Figure 8.2 shows a copy of the disk file AUTOIND created by reporting the SPECIES data base using the automatic indentation option.

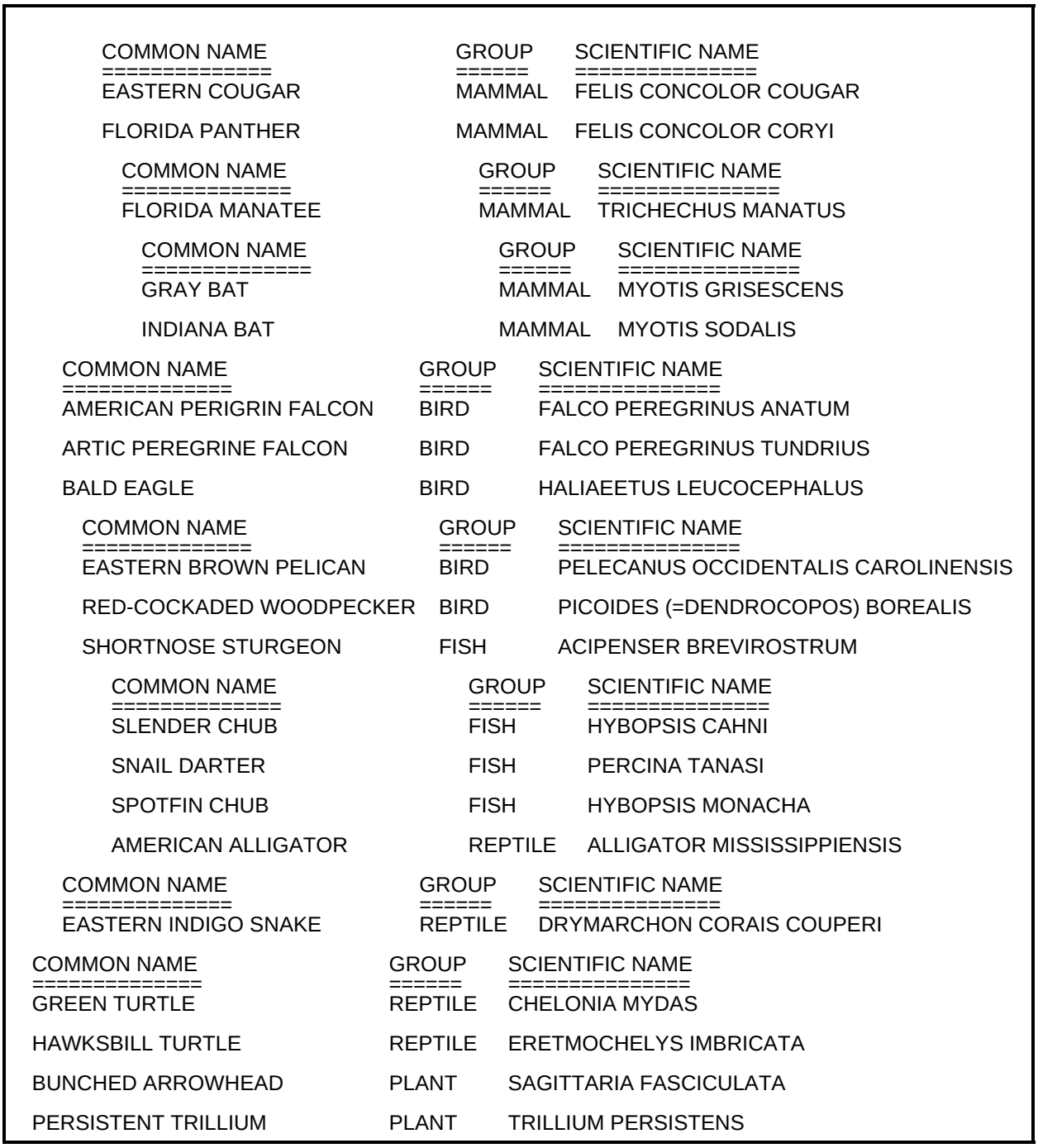


Figure 8.2 Sample REPORT output using Automatic Identation

The second special feature of the REPORT menu item is sub-total, which allows a numeric field to be summed. The report breaks out sub-totals for consecutive records whenever the value in another field changes. Sub-total breakouts can be arranged by using ORDER on a specified set of records that you want totaled (remember that you may total only numeric fields in the data base). If more than one field is used to order the sub-total

breakouts the ordering must be done in one ORDER menu item selection, not several successive orders. The last ordering field specified usually becomes the user specified control field. Sub-total sums only one field at a time. Some experimentation may be needed to obtain the desired sub-total breakouts. A grand total is printed at the bottom of the report.

In the SPECIES data base, ORDER the whole data base and call the new set SUBSET. Order on the fields STATUS and then GROUP. Report the SUBSET set to the printer, Fields 4, 6, and 7. Sub-total the numeric field TASK and specify the field GROUP as the control field. Screen 8.3 shows the REPORT process.

```
Enter main menu selection? 27 <REPORT>

Enter the name of the set to be listed, or
<RETURN> to list the full data base? SUBSET___<RETURN>
Where do you want this report listed?                    1) Screen
                                                         2) Disk
                                                         3) Printer
? 3 <RETURN>
Do you want to change any printer settings? N <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 4,6,7 <RETURN>

Enter a report title to be included in each page heading?
? <RETURN>
Do you want any special REPORT features? Y <RETURN>
Select one:  1) Automatic indentation
             2) Sub-totals
             3) Record separators
             4) Table separators
             5) Free format <MANAGE STYLE>
? 2 <RETURN>
Enter the field number to be totaled? 7 <RETURN>
Enter the field number which controls subtotal breakouts? 4 <RETURN>
Do you want a page ejected on the printer? Y <RETURN>
```

Screen 8.3

Figure 8.3 shows the results of reporting the SPECIES data base to the printer using the sub-total option on the ordered set SUBSET.

```
Data base is SPECIES, set is SUBSET          19-MAR-90 11:56:25  Page  1

GROUP          STATUS         TASK CODE

BIRD           ENDANGERED     1
BIRD           ENDANGERED     1
BIRD           ENDANGERED     1
BIRD           ENDANGERED     2
BIRD           ENDANGERED     2
                                          TASK CODE   Sub-total = 7
-------------------------------------------------------------------------------
FISH           ENDANGERED     2
FISH           ENDANGERED     3
                                          TASK CODE   Sub-total = 5
-------------------------------------------------------------------------------
MAMMAL         ENDANGERED     2
MAMMAL         ENDANGERED     2
MAMMAL         ENDANGERED     3
MAMMAL         ENDANGERED     4
MAMMAL         ENDANGERED     4
                                          TASK CODE   Sub-total = 15
-------------------------------------------------------------------------------
PLANT          ENDANGERED     0
PLANT          ENDANGERED     0
                                          TASK CODE   Sub-total = 0
-------------------------------------------------------------------------------
REPTILE        ENDANGERED     3
REPTILE        ENDANGERED     0
                                          TASK CODE   Sub-total = 3
-------------------------------------------------------------------------------
FISH           THREATENED     3
FISH           THREATENED     3
                                          TASK CODE   Sub-total = 6
-------------------------------------------------------------------------------
REPTILE        THREATENED     1
REPTILE        THREATENED     0
                                          TASK CODE   Sub-total = 1
-------------------------------------------------------------------------------
                                          TASK CODE Grand total = 37
```

Figure 8.3 Sample REPORT output using Sub-totals

The third special feature of the REPORT menu item is Record Separators, which prints a line of a user specified character between records in a report. This option is useful if records contain much variable length field information. Screen 8.4 shows the process of reporting from the WETLAND data base to the printer using the record separator option.

```
Enter main menu selection? 27 <RETURN>

Enter the name of the set to be listed, or
<RETURN> to list the full data base? _____ <RETURN>
Where do you want this report listed?                    1) Screen
                                                         2) Disk
                                                         3) Printer
? 3 <RETURN>
Do you want to change any printer settings? N <RETURN>

 1. ITEM#
 2. AUTHOR
 3. YEAR
 4. SEQUENCE
 5. HYDROUNIT
 6. LANDFORM
 7. LOCATION
 8. ECOREGION
 9. C.E.DISTRICT
10. TITLE
11. SOURCE
12. SUBJECT
13. WETLAND.TYPE
14. ABSTRACT
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 2,3,10 <RETURN>
Enter a report title to be included in each page heading?
? <RETURN>
Do you want any special REPORT features? Y <RETURN>
Select one:          1) Automatic indentation
                     2) Sub-totals
                     3) Record separators
                     4) Table separators
                     5) Free format <MANAGE STYLE>
? 3 <RETURN>
Enter the separator character (or decimal equivalent)? # <RETURN>
Do you want a page ejected on the printer? Y <RETURN>
```

Screen 8.4

Figure 8.4 shows a partial copy of the printout generated when the WETLAND data base was reported to the printer using the record separator option.

```
Data base is WETLAND                                    19-MAR-90 11:27:01  Page  1

AUTHOR                                                                  YEAR
RADANT RD, SCALET CG                                                    1975
TITLE
=====
FOOD HABITS OF YOUNG-OF-THE-YEAR FISHES IN ABBEY POND, SOUTH DAKOTA.

################################################################################

ROGERS JP, KORSCHGEN LJ                                                 1966
TITLE
=====
FOODS OF LESSER SCAUPS ON BREEDING, MIGRATION, AND WINTERING AREAS.

################################################################################

ROLLO JD, BOLEN EG                                                      1969
TITLE
=====
ECOLOGICAL RELATIONSHIPS OF BLUE AND GREEN-WINGED TEAL ON THE HIGH
PLAINS OF TEXAS IN EARLY FALL.

################################################################################

ROSINE WN                                                               1955
TITLE
=====
THE DISTRIBUTION OF INVERTEBRATES ON SUBMERGED AQUATIC PLANT SUR-
FACES IN MUSKEE LAKE, COLORADO

################################################################################

SCHROEDER LD                                                            1973
TITLE
=====
A LITERATURE REVIEW ON THE ROLE OF INVERTEBRATES IN WATERFOWL MAN-
AGEMENT.

################################################################################

SCHROEDER LD                                                            1975
TITLE
=====
EFFECTS OF INVERTEBRATE UTILIZATION ON WATERFOWL PRODUCTION.

################################################################################

SENECA ED, BROOME SW, WOODHOUSE WW, CAMMEN LM, JYON JT III              1976
TITLE
=====
ESTABLISHING SPARTINA ALTERNIFLORA MARSH IN NORTH CAROLINA

                    .
                    .
                    .
```

Figure 8.4 Sample REPORT ouput using Record Separators

The fourth special feature of the REPORT menu item is Table Separators, which prints a line of a user specified character between the headings of a table and its contents in a report. Table separators are nice when the report produces columns, especially when an alternate font has been specified for title headings. Screen 8.5 shows the process of reporting the SPECIES data base to the printer using the table separator option.

```
                                   QUICKTEXT MENU
                 ================================================
 TASK           | DATA BASE   |     SETS      | RECORDS   |   PROGRAM
--------------------------------------------------------------------------
DATA ENTRY      | 1. Create       5. Modify     10. Store
and             | 2. Rebuild      6. Define     11. Update
CLEAN UP        | 3. Destroy      7. Forget     12. Delete
                | 4. Merge
--------------------------------------------------------------------------
                |                16. Select
PROBE           |                17. Combine                 20. FuzzyValue
                |
--------------------------------------------------------------------------
                | 21. Directory  25. Setnames   29. Print    35. Help
REPORT          | 22. Status     26. Values     32. Browse
                | 23. Fieldnames 27. Report
                |                28. List
--------------------------------------------------------------------------
                | 37. Open       40. Export                  43. Brief
CONTROL         | 38. Backup     41. Subdivide               44. Bye
                |                42. Order                   45. Misc
                |
--------------------------------------------------------------------------
Enter main menu selection? 27 <RETURN>

Enter the name of the set to be listed, or
<RETURN> to list the full data base? __________ <RETURN>
Where do you want this report listed?                        1) Screen
                                                             2) Disk
                                                             3) Printer
? 3 <RETURN>
Do you want to change any printer settings? N <RETURN>

 1. ITEM#
 2. SCIENTIFIC NAME
 3. COMMON NAME
 4. GROUP
 5. STATE
 6. STATUS
 7. TASK CODE
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 3,6 <RETURN>

Enter a report title to be included in each page heading?
? <RETURN>
Do you want any special REPORT features? Y <RETURN>
Select one:     1) Automatic indentation
                2) Sub-totals
                3) Record separators
                4) Table separators
                5) Free format <MANAGE STYLE>
? 4 <RETURN>
Enter the separator character (or decimal equivalent)? & <RETURN>
Do you want a page ejected on the printer? <RETURN>
```

Screen 8.5

Figure 8.5 shows a copy of the printout generated when the SPECIES data base was reported to the printer using the table separator option.

```
Data base is SPECIES                    19-MAR-90 11:34:34  Page  1

&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&
COMMON NAME                                 STATUS
&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&
EASTERN COUGAR                              ENDANGERED
FLORIDA PANTHER                             ENDANGERED
FLORIDA MANATEE                             ENDANGERED
GRAY BAT                                    ENDANGERED
INDIANA BAT                                 ENDANGERED
AMERICAN PERIGRIN FALCON                    ENDANGERED
ARTIC PEREGRINE FALCON                      ENDANGERED
BALD EAGLE                                  ENDANGERED
EASTERN BROWN PELICAN                       ENDANGERED
RED-COCKADED WOODPECKER                     ENDANGERED
SHORTNOSE STURGEON                          ENDANGERED
SLENDER CHUB                                THREATENED
SNAIL DARTER                                ENDANGERED
SPOTFIN CHUB                                THREATENED
AMERICAN ALLIGATOR                          ENDANGERED
EASTERN INDIGO SNAKE                        THREATENED
GREEN TURTLE                                THREATENED
HAWKSBILL TURTLE                            ENDANGERED
BUNCHED ARROWHEAD                           ENDANGERED
PERSISTENT TRILLIUM                         ENDANGERED
&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&
```

Figure 8.5 Sample REPORT output using Table Separators

The fifth special feature of the REPORT menu item is Free format <MANAGE STYLE>. This option prints text with a <> title before each field of information. Screen 8.6 shows the process of reporting the SPECIES data base to the printer using the Free format <MANAGE STYLE> option.

```
Enter main menu selection? 27 <REPORT>

Enter the name of the set to be listed, or
<RETURN> to list the full data base? _____ <RETURN>
Where do you want this report listed?                    1) Screen
                                                         2) Disk
                                                         3) Printer
? 3 <RETURN>
Do you want to change any printer settings? N <RETURN>

  1. ITEM#
  2. SCIENTIFIC NAME
  3. COMMON NAME
  4. GROUP
  5. STATE
  6. STATUS
  7. TASK CODE
Enter fields to be reported either as numbers, or ranges (i.e. 2-5),
separated by commas, or ALL for all fields, or CR for same as before.
? 2,3,6 <RETURN>

Enter a report title to be included in each page heading?
? <RETURN>
Do you want any special REPORT features? Y <RETURN>
Select one:        1) Automatic indentation
                   2) Sub-totals
                   3) Record separators
                   4) Table separators
                   5) Free format <MANAGE STYLE>
? 5 <RETURN>
Do you want a page ejected on the printer? Y <RETURN>
```

Screen 8.6

Figure 8.6 shows a partial copy of the printout generated when the SPECIES data base was reported to the printer using the Free format <MANAGE STYLE> option.

```
Data base is SPECIES                5-MAR-90 11:50:50  Page  1

<SCIENTIFIC NAME> FELIS CONCOLOR COUGAR   <COMMON NAME> EASTERN COUGAR
<STATUS> ENDANGERED

<SCIENTIFIC NAME> FELIS CONCOLOR CORYI   <COMMON NAME> FLORIDA PANTHER
<STATUS> ENDANGERED

<SCIENTIFIC NAME> TRICHECHUS MANATUS   <COMMON NAME> FLORIDA MANATEE
<STATUS> ENDANGERED

<SCIENTIFIC NAME> MYOTIS GRISESCENS   <COMMON NAME> GRAY BAT
<STATUS> ENDANGERED

<SCIENTIFIC NAME> MYOTIS SODALIS   <COMMON NAME> INDIANA BAT
<STATUS> ENDANGERED

<SCIENTIFIC NAME> FALCO PEREGRINUS ANATUM
<COMMON NAME> AMERICAN PERIGRIN FALCON   <STATUS> ENDANGERED

<SCIENTIFIC NAME> FALCO PEREGRINUS TUNDRIUS
<COMMON NAME> ARTIC PEREGRINE FALCON   <STATUS> ENDANGERED

<SCIENTIFIC NAME> HALIAEETUS LEUCOCEPHALUS   <COMMON NAME> BALD EAGLE
<STATUS> ENDANGERED

<SCIENTIFIC NAME> PELECANUS OCCIDENTALIS CAROLINENSIS
<COMMON NAME> EASTERN BROWN PELICAN   <STATUS> ENDANGERED

<SCIENTIFIC NAME> PICOIDES (=DENDROCOPOS) BOREALIS
<COMMON NAME> RED-COCKADED WOODPECKER   <STATUS> ENDANGERED

<SCIENTIFIC NAME> ACIPENSER BREVIROSTRUM   <COMMON NAME> SHORTNOSE STURGEON

<STATUS> ENDANGERED

<SCIENTIFIC NAME> HYBOPSIS CAHNI   <COMMON NAME> SLENDER CHUB
<STATUS> THREATENED

<SCIENTIFIC NAME> PERCINA TANASI   <COMMON NAME> SNAIL DARTER
<STATUS> ENDANGERED

<SCIENTIFIC NAME> HYBOPSIS MONACHA   <COMMON NAME> SPOTFIN CHUB
<STATUS> THREATENED

<SCIENTIFIC NAME> ALLIGATOR MISSISSIPPIENSIS
<COMMON NAME> AMERICAN ALLIGATOR   <STATUS> ENDANGERED

<SCIENTIFIC NAME> DRYMARCHON CORAIS COUPERI
<COMMON NAME> EASTERN INDIGO SNAKE   <STATUS> THREATENED

<SCIENTIFIC NAME> CHELONIA MYDAS   <COMMON NAME> GREEN TURTLE
<STATUS> THREATENED

                    •
                    •
                    •
```

Figure 8.6 Sample REPORT output using Free format <MANAGE STYLE>

Congratulations! You have finished Lesson 8 of the training package, where you have learned several powerful techniques, such as:

* how to REPORT a file to disk using no special REPORT features

* how to use REPORT to create output in a variety of formats by using the special REPORT features:

    1) Automatic indentation
    2) Sub-totals
    3) Record separators
    4) Table separators
    5) Free format <MANAGE STYLE>

To gain more experience with special REPORT features go over this lesson once again.

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